THE

ECONOMIC JOURNAL

VOLUME XXXVIII

THE

ECONOMIC JOURNAL

THE JOURNAL OF

The Royal Economic Society

EDITED BY

J. M. KEYNES and D. H. MACGREGOR

VOLUME XXXVIII

REPRINTED 1967 FOR
Wm. DAWSON & SONS LTD., LONDON
WITH THE PERMISSION OF
THE ROYAL ECONOMIC SOCIETY

Originally printed in Great Britain by
Richard Clay & Sons Ltd., London and Bungay, Suffolk
Reprinted in Belgium by Jos. Adam, Brussels

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ROYAL ECONOMIC SOCIETY

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MARCH, 1928

UNEMPLOYMENT AND WAGE RATES

I

Professor Pigou's article on *Wage Policy and Unemployment* [1] raised an issue of immediate practical, as well as theoretical, interest. It was directed mainly to an examination of the theoretical possibilities of relieving unemployment, without reducing wages, by means of protective duties or subsidies; but the occasion of the investigation was the abnormal unemployment from which British industry has suffered since 1921. This abnormal unemployment, which he suggested might amount to 5 per cent., Professor Pigou attributed to the maintenance of wages at too high a level. He referred to one other possible cause, maldistribution of labour, due to expansion during the war of industries producing munitions; but he referred to it only to dismiss it—"had this been a dominant factor . . . we should have expected to find a marked shortage of labour in important groups of industries to balance the excess in engineering, shipbuilding and so on; and of such marked shortage there is no sign." He cited and supplemented M. Rueff's figures of the correlation between real wages and unemployment, but based his conclusions on more general considerations. He expressly guarded himself against the practical inference that wage rates must be reduced and against the assumption that wages in *all* industries are "too high"; so that Professor Pigou's authority cannot be used by employers in any of the current wage negotiations.

With these qualifications the broad conclusion, that full employment is impossible under existing circumstances with the present rates of wages, is probably unavoidable. At the same time the relation between wage rates and employment is so far from simple that some further discussion of the question may be permitted. Professor Pigou's argument suggests three comments. In the first place, it might be taken to imply that an

[1] Economic Journal, Sept., 1927, pp. 355-68.

uneconomically high level of wage rates and an ill-adjusted distribution of labour are the only possible causes of the present abnormal unemployment. In the second place, by taking account only of the relations of "the general body of wage rates," the "rough average" of wage rates, "the general level of wage rates" with the percentage of unemployment in industry as a whole, the argument gives inadequate consideration to the alternative, ill-adjusted distribution of labour, that it dismisses. In the third place, since the distribution of labour has an important influence on the productivity of industry, and therefore helps to determine the wage economically possible, it is not easy to separate the two and to treat the wage level and the maldistribution of labour as independent factors in the causation of unemployment; if labour is ill-distributed, production per head will be low and the average wage compatible with full employment will be low; if labour is ideally distributed, production per head will be high, and the average wage compatible with full employment will be high. I will elaborate briefly these three comments in the following sections.

II

Since it was not the primary object of Professor Pigou's article to analyse the post-war problem of unemployment, the omission of any reference to causes other than those mentioned was quite defensible. In actual wage negotiations, however, the representatives of the wage-earners have usually a good deal to say about causes of unemployment other than "high" wages. The level of wages affects employment by affecting costs, and the present average level is alleged to be "too high," because it is higher than before the war while production per head has declined. But wages are not the only element in the costs of industries suffering from unemployment that has risen disproportionately. In some industries capital charges have increased disproportionately, and, although capital is being written down and obligations liquidated, or high charges incurred in 1920 and 1921 are being replaced by loans at lower rates of interest, the burden is still probably heavier than before the war. In the section of the Cotton Spinning industry that was recapitalised in 1919 and 1920, loan charges require in the aggregate a sum at least three times as great as the aggregate distribution of profits in a pre-war year. Credit again costs more than before the war, and many firms are paying interest, in pounds worth fourteen and sixpence in pre-war money, on overdrafts incurred when the pound was

worth only eight pre-war shillings. A considerable enhancement of costs is due to the policy of restriction of output, by short time and other methods, that has been adopted in some industries to keep up prices during the depression. The war encouraged monopolistic combination, and war and post-war profits strengthened combinations that were in existence before; some of these combinations are accused of increasing costs by charging disproportionately for their part in the making of a product that involves the co-operation of several industries. High direct taxation may have an influence, even if it is impossible to "put income tax on to prices," by deterring business-men from undertaking deals which do not show a reasonable prospect of a margin of profit higher than was required to tempt them before the war. Taxation is an undoubted addition to costs and check to employment when it is imposed as a charge on industry, to be borne whether the enterprise yields a profit or incurs a loss, as the greater part of the cost of relieving unemployment is imposed in the form of contributions to the unemployment insurance fund and local rates. In very few industries is it clear that a reduction in wages would by itself do much to stimulate employment; and, while an all-round or average reduction might have a certain and predictable effect, organised labour will resist any reduction so long as it can point to other costs that have risen proportionately more than, or as much as, labour costs.

It may be argued that other influences, so far as they affect employment, affect it by reducing the rates of wages that are economically possible so long as their operation is unchecked, and that it is therefore unnecessary to consider them separately in an examination of the relation of wages and unemployment. Some reference to them is, however, necessary, since, as Professor Pigou points out in the special case of the slump of 1920–1, the "uneconomical" level of wages may be "predominantly an effect, just as the growth in unemployment was an effect, of the general causes lying behind the slump." And practically it is important to bring this out, because the acceptance of "high" wages as the sufficient cause leads to a policy of holding wages down and waiting for the post-war problem of unemployment, "so to speak, to solve itself"; whereas, if it be recognised that the "uneconomical" character of existing wages, which are in themselves low, is itself an effect of other causes, we shall be forced to investigate those other causes before we acquiesce in the present level of wages in the depressed industries.

III

The extent and influence of the maldistribution of labour caused by the war can be realised only if a more detailed comparison of wage rates and unemployment is made than Professor Pigou found necessary for his limited purposes. The indices he uses, Professor Bowley's index of weekly wage rates and the trade union unemployment percentage, are very differently weighted. The engineering, shipbuilding group of industries (which Professor Pigou notes as exceptional) has a weight of only one part in nine in the wage index, but of seven parts in sixteen in the unemployment index; the exact significance of any correlation observed requires, therefore, an examination of the components of the two indices. Again, both indices are averages of widely divergent series. Weekly wage rates in September last, according to the Ministry of Labour calculations, ranged from 120 per cent. of the 1914 figure in the case of Iron and Steel workers in South Wales to 245 per cent. of 1914 in the case of Railway Porters. A general unemployment percentage at the same date of 9·3 per cent. was the resultant of rates varying from 32·4 per cent. in Tin Plate to 1·2 per cent. in Slate Quarrying. Coal, with earnings averaging 52 per cent. above 1914, accounted for nearly a quarter of the unemployment in Great Britain in September 1927, while in September 1923, with earnings 10 per cent. higher for a week 12 per cent. shorter, it accounted for less than 3 per cent. of the unemployed; on the other hand, General Engineering, with skilled rates 42 to 45 per cent. above pre-war in 1923 showed 137,000 unemployed, while in 1927 rates were rather higher at 48 or 49 per cent. and the number of unemployed down to 60,000. It is possible, therefore, that a rise in the general wage index might be accompanied by a fall in the general unemployment index as a result of a shifting of labour, which made it possible to raise wage rates in the industries from which the shift took place more than it was necessary to reduce wages in the industries into which labour moved; this, in fact, as will appear later, is what is happening.

A high average wage level may be causally connected with a high percentage of unemployment in industry in three ways:

1. All or most of the wage rates may be "too high," having moved up together, or stayed up together when prices fell, thus causing generally diffused unemployment in industry.

2. Some wage rates may be "too high," thus causing in the

industries in which they have to be paid the bulk of the unemployment in the country.

3. Some wage rates may be "too high," not in the sense that they cause unemployment in the industries in which they have to be paid, but in the sense that they involve a level of charges to other industries, that depend on them for services or products, so high that unemployment is caused in these other industries.

The following table gives the Ministry of Labour's estimate of wage levels for industry as a whole and for certain industries separately, and the unemployment percentage similarly for industry as a whole and for the selected industries; the industries selected are those in which material for the comparison is available.

	Relative Levels of Weekly Rates of Wages: Sept. 1927 as percentage of Aug. 1914.	Percentage of Insured Persons unemployed: Great Britain and North Ireland: Sept. 26, 1927.
All trades	170 175	9·3
Building	197	9·1
Coal (earnings)	152	19·1
Engineering: skilled	149	10·0 [1]
,, labourer	182	
Shipbuilding: shipwright	135	21·8
,, labourer	168	
Electrical Installation	191	5·7
Iron and Steel	120–170	11·8–32·4
Cotton	161	9·3
Wool Textile	180–190	8·2
Hosiery (Midlands)	158⅓	5·7
Boot and Shoe	200	8·2
Railway Service	200–245	4·6
Docks, etc.	190–240	22·1
Printing: compositor	207	4·3
Furniture: cabinet-maker	184	4·5
Baking	214	6·0
Pottery	150–161¼	12·3
Heavy Chemicals	205–215	6·2 [2]

[1] "General Engineering: Iron- and Steel-founding."
[2] Average of "Chemicals Manufacture" and "Explosives."

It is apparent at once that the present relation between wage rates and unemployment approximates to the second case we distinguished rather than to the first. There is general unemployment; but it is least where wage rates are highest by comparison with the 1914 standard, and worst where wage rates are lowest. With only two exceptions in the table an unemployment percentage above the average is associated with a wage

level below the average, or vice versa. Moreover, although there is general unemployment, there is a noticeable concentration of unemployed in a limited group of industries. Coal, Iron and Steel, Shipbuilding, General and Marine Engineering, with less than a fifth of the insured population in them, account for over a third of the unemployed; add Docks, Shipping, and the principal Textile industries, and the proportion of the insured population is only 30 per cent., but the proportion of unemployed over half.

By itself this unequal distribution of unemployed among industries would be consistent with the hypothesis that "high" wages are the sole or chief cause of the present unemployment. Before the war the constructional and equipment industries, which are the chief members of the depressed group now, were usually more intensely affected by trade depression than were other industries. And the absolute level of unemployment in the less depressed industries now is high by comparison with pre-war experience. It is the association of low wage levels and high unemployment percentages that is significant, and that makes it difficult to accept the hypothesis that high wages rather than maldistribution are the explanation.

Before the war wage levels were adjusted, not only to the openings for employment, but also to the different degrees of skill and responsibility involved in different tasks. The adjustment was very rough; but a marked divergence of wage rates from what may perhaps be called skill parities would have provoked a movement of labour that would correct that divergence. Wages tended to be "fair" in the special sense which Marshall gave to that epithet,[1] because that was involved in the broad adjustment to conditions of supply as well as demand which, as Professor Pigou points out, wage rates attained. But that adjustment has been lost; the pre-war relation between rates of wages and levels of skill has been dislocated. Not only are the rates of fitters and miners too high to permit the employment of all the fitters and miners seeking work; they are too low to afford the fitters and miners who are in work an income "on a level with the payment made for tasks in other trades which are of equal difficulty and disagreeableness, which require equally rare natural abilities and an equally expensive training." If then "fair wages" are, as Professor Pigou has explained,[2] "a necessary correlate of . . . the ideal distribution of labour," the present divergences from "fairness" are proof of a bad dis-

[1] Cf. Pigou, *Economics of Welfare*, p. 520. [2] *Loc. cit.*

tribution of labour. If there were no unemployment, the divergence of wage rates from pre-war skill parities would point to an uneconomic distribution of labour; if there were no such divergence of wage rates, but a concentration of unemployment in a limited group of industries employing a minority of the workers of the country, we should again suspect an uneconomic distribution of labour; when we find exceptional unemployment in conjunction with, and in spite of, exceptional reductions in real wages, do we need further evidence of maldistribution of labour? Labour is crowded into occupations in which it yields only a low economic return, while in other occupations in which it would yield a higher return, employment is restricted.

We are confirmed in this conclusion if we glance at the particular circumstances of the industries which account for most unemployment. The Iron and Steel, General Engineering and Shipbuilding group had at the time of the last count an insured population of 1,100,000, of whom 152,000, or 13·8 per cent., were unemployed. The influence of war-induced expansion is clear enough here. Between the two censuses of 1911 and 1921 the group in which these industries fall increased by 40 per cent.; four-fifths of the entire increase in the occupied male population was in this group. Not only did the war, by directing such a disproportionate number of the new recruits to industry into this group, create an inevitable problem of unemployment when the war should end, but, by inducing a similar expansion in other countries, it aggravated the effects of overcrowding, forcing down prices and with them wages. The influence of the war in the Coal-mining industry, which in July had an insured population of 1,198,800 and accounted for nearly a quarter of all the unemployed, is less obvious but none the less real. It took the form of checking for six years the necessary adjustment of the industry to technical changes in other industries, which reduced the demand for coal, and to exhaustion of pits, which called for the transfer of workers to expanding fields or to other industries. Even before the war the growth of the industry was due to the continuous opening up of new pits rather than, as in other industries, to the expansion of existing concerns; at the end of the post-war boom the industry found itself faced with the necessity suddenly of adjusting itself to six years' accumulation of economic change. The transient prosperity caused by the closing of the Ruhr pits during the French occupation and the grant of a subsidy in 1925 and 1926 encouraged the industry to defer the unpleasant business of facing the new situation. The

loss inflicted by the war on the two great textile industries was rather different in kind. By interrupting their connection with their export markets it gave an opportunity for local manufactures and other exporting countries to establish themselves in what had been predominantly or exclusively British markets; the post-war depreciation of the exchanges of competing countries and the appreciation of sterling have hampered British exporters in such attempts as they have made to recover lost markets, and a contraction of volume appears to be inevitable.

There are large numbers of unemployed in certain industries, however, in which wage rates are relatively high, the largest group being in Docks and Building. Maldistribution of labour would appear to be the underlying cause in these industries also. Docks have for generations been the chief centres of casual employment, a system that, quite irrespective of wage rates, attracts and holds more workers than can be given employment. In the case of Building, the limits to the employment of other workers are set by the supply of bricklayers for outside work and of plasterers for inside work. In July last, while the percentage of unemployment for the industry as a whole was 6·8, for bricklayers and plasterers it was only 1·6 and 1·5 respectively.

There is a possibility still to be examined, that wage rates in some industries by imposing an undue burden on other industries may cause unemployment in these. The direct effect of such high rates cannot be great. Among the industries in which wages have advanced most, Printing, Boots and Shoes, Baking, Heavy Chemicals, do not contribute a large proportion to the expenses of the depressed industries; so far as it lies at all, the charge must lie against the Transport industries, especially Railways, Coal, as the chief source of power, and Local and Central Government as the source of rates and taxes. Now railway wages have gone up much more than railway receipts, which on the average of the four years since the present groups were constituted are only 52 per cent. above 1913, considerably less than the rise in wages. It follows that the higher wages are paid at the expense of the shareholders rather than the railway users, and any reduction in them would be for the benefit of the shareholders, since the railways have so far not earned the restricted standard revenue to which the Railway Act of 1921 entitles them. Coal prices are much below the average of prices, as are miners' wages below the average of wages; the miner has made a larger concession to reduce the costs of other industries than any other class - some of the benefit of which goes to the

foreign competitors of British industry—and could make a further concession only by accepting a rate of wages out of all relation to the nature of his work. There remains the burden of rates and taxes. This is heavy, but is attributable rather to new functions imposed by Parliament on Central and Local Authorities than to high rates of pay for public servants. The disparity of payment in different occupations is a factor in causing industrial unrest; but it is only one among a large number of factors that tend to make manufacturing costs in the export industries high.

I conclude that so far as "high wages" are the explanation of the present unemployment, it is the low wage rates of the depressed industries that are "too high," not the high wages of the prosperous industries.

It remains to consider Professor Pigou's reason for rejecting maldistribution as the explanation of the present unemployment; that excess in one industry would have been balanced by shortage in others, and of such shortage there is no sign. It is not clear what sign is expected. Overtime, unlike short time, is not registered; but some overtime is being worked. Employment Exchanges are unable to fill all the vacancies notified by employers, though they fill eight out of nine as compared with four out of five in the two pre-war years. There are striking variations in the extent of unemployment in the different Exchange Divisions, varying in July from 4 per cent. in the South-Eastern to 19·2 per cent. in Wales. Even General Engineering had an unemployment percentage of under 5 in London and the two Southern Divisions taken together. The "marked shortage" of bricklayers and plasterers has been referred to. It should be remembered that before the war a general unemployment percentage of 2 was not abnormal in times of boom, when all industries were crying out for labour. Such indications of unsatisfied demands for labour are, however, exceptional; unemployment is not confined to the overcrowded industries. At the same time it does not seem to be correct to say, as Professor Pigou says, "We are not entitled to presume that, in the absence of any other change, a mere shifting of workpeople away from the war-swollen industries would have enabled any large number of them to find work." Such a shift is actually taking place on a large scale, and has already relieved unemployment to a marked degree, without any general reduction in wage rates. This movement is indicated in the following table, based on the fuller tables of numbers insured and unemployed in the *Ministry of Labour Gazette* for November 1923 and November 1927.

Expanding Industries

	Increase, July 1923–July 1927.		Unemployment Percentage,	
	No.		July 1923.	July 1927.
Distributive Trade	327,090	26·1	6·2	4·4
Building and Contracting	173,200	20·5	13·1	8·5
Road Transport .	49,840	19·4	11·2	9·3
Motor Manufacture, etc.	41,030	21·4	9·6	7·9
Brick, Cement, etc.	35,680	40·5	8·9	4·9
Printing, etc. . .	28,770	12·6	5·6	4·3
Furniture . . .	20,390	21·7	7·7	4·6
Shipping, etc. .	18,730	12·3	18·6	14·3
Electrical Engineering	18,340	30·1	7·2	4·8
Artificial Silk, etc.	17,770	47·6	6·7	6·6
All expanding	874,740	17·4		

Contracting Industries

	Decrease, July 1923–July 1927.		Unemployment Percentage,	
	No.	%.	July 1923.	July 1927.
General Engineering . .	66,560	10·0	20·3	9·2
Shipbuilding . . .	53,940	20·0	43·2	22·3
Coal	44,590	3·6	3·0	21·5
Woollen and Worsted . .	20,240	7·5	9·3	9·5
Iron and Steel . . .	16,440	7·8	20·8	18·2
Baking, etc. . . .	12,830	8·0	10·0	5·5
Dress and Mantle . .	11,420	9·7	6·3	4·0
Canal, Docks, etc. . .	10,110	5·3	27·1	22·0
Chemicals	8,590	8·3	11·6	6·2
Marine Engineering . .	8,410	12·8	22·3	13·2
All contracting . . .	304,120	7·3		

Note.—The total insured population increased between July 1923 and July 1927 by 372,800, or 3·2 per cent. The general unemployment percentage fell between the same two dates from 11·5 to 9·2.

Doubtless other influences have been at work[1]; but, as between wage adjustments and shifting of labour from war-swollen industries, it is the latter that appears to have influenced employment the more.

IV

If we are right in thinking maldistribution of labour the principal influence in causing the present unemployment, then it is not possible to say definitely either that the general or

[1] Cf. Report of International Economic Conference, Intro. § 5.

average level of wages is "too high" or that it is lower than it ought to be. The distribution of labour not only explains divergences between wage rates in different industries; it also affects the general or average level, since it is an important factor in determining the productivity of industry as a whole. If labour is ill-distributed, as shown by the divergence of wages rates from "fair wages," then production will be down, and the average level of wages compatible with full employment will be low.

A better distribution of labour, even if it brought down wages in some high-rated occupations, might so increase production that the average of wage rates would be raised; it would have this effect, since it would bring about something approximating more closely to an equi-marginal application of labour resources to different uses. Of course such a redistribution might be effected and still leave a large proportion of the working population unemployed, because the new wage rates established were all a little too high to permit full employment of the population of a single country in a world economy; but for any given volume of employment a redistribution in accordance with the principle of equi-marginal application of resources would permit a higher average wage rate than the present, and conversely such a redistribution would permit a larger volume of employment at the present average wage. The test and sign of such a redistribution will be the elimination of the present divergence of wage rates from skill and responsibility differences; on the other hand, any increase in these divergences, whether by further reduction of such low rates as rule in mining or raising of such high rates as rule in building, must have the effect of exaggerating the maldistribution, in the one case by making possible the retention in an industry of labour in excess of the amount it can employ at a "fair" wage, in the other by opposing an obstacle to the absorption of all the labour that the industry might employ at a "fair" wage. There may be cases in which a temporary reduction in wage rates may be justified in preference to increasing unemployment, to tide over a purely temporary emergency; but the purely temporary nature of the emergency must be demonstrated before any attention is paid to this plea.

The interdependence of wages and the distribution of labour affects our problem in another way. The present divergence of wage rates from the scale that skill and responsibility would dictate is as striking a change from pre-war conditions as is the present unemployment. Before the war such a divergence was

exceptional and usually temporary, because a continuous redistribution of labour among the industries of the country was constantly going on. The importance of this movement is brought out by a comparison between the movement of average wage rates making no allowance for numbers receiving the different rates, and the movement of average wage rates when allowance is made for changes in numbers; Mr. G. H. Wood's index shows an increase of only 15 per cent. between 1880 and 1910 for the former, of 27 per cent. for the latter. Workers must have cleared out of declining and low-wage industries and diverted their children from them, while they pressed into the higher-paid occupations. This spontaneous redistribution since the war has been insufficient to maintain the connection between wage rates and degrees of skill, which existed before the war and will have to be restored again before industrial stability can be achieved. There has been a considerable efflux from the depressed industries; but not on a scale sufficient to force up wage rates in these industries themselves and to force wage rates down in the industries into which (so far as they have not emigrated) they must have found their way. The depressed industries are still overcrowded, as is shown by the concentration of the unemployed in them; they are still relatively underpaid, even at rates of pay that involve a high degree of unemployment.

There has been a great deal of movement, but less perhaps than there would have been if rights of benefit under the Unemployment Insurance scheme had not been continuously extended. The scheme has operated to check migration more particularly by encouraging organised short time; instead of employment being concentrated on a limited number of full-time workers, the rest being totally unemployed and thereby encouraged to leave the industry, the available work is spread by a system of alternating shifts, in which the workers take turns to work and to receive unemployment benefit; so that the industry is enabled at the expense of the Insurance Fund to retain the services of twice as many workers as it can give full employment to.

In these circumstances the divergence of wage rates in different industries is necessary to induce labour to move from the depressed to the expanding industries; and this makes it difficult to accept an incidental suggestion of Professor Pigou's. In explaining that in attributing unemployment to the high wage level he does not mean that all wages are "too high," he suggests that unemployment might be relieved by reducing rates in

certain sheltered industries; "it might well happen that the sheltered industries would absorb, not only their own unemployed, but—after a transitional adjustment—the unemployed of the unsheltered industries also." Now there may be "high wage" industries in which a reduction in wages would expand employment, but certainly there are some in which reduction would not necessarily have this effect. There are, first, the industries in which the demand for labour is inelastic. The railway companies have been trying for years both to reduce their staffs and to reduce their wage bills; the size of a railway's staff is largely independent of the volume of traffic; the volume of traffic is determined largely by other factors than railway charges, and railway charges do not depend wholly on railway wages; while a reduction in railway wages might have some effect on employment in other industries, it is unlikely that it would have much on the railways themselves. Similarly it is difficult to see any very direct dependence of employment upon rates of pay in the case of the Dock industry or Local Government. There are, second, the industries in which the demand for labour is elastic, but in which the check to expansion is some factor other than the rate of wages. In the Building industry, for example, the rate of expansion has been limited by the scarcity of bricklayers and plasterers. The demand for houses, and therefore for building labour, would expand if building costs were lower; but it is doubtful whether the supply of houses could expand more rapidly. High wages have been no obstacle to the employment of the scarce craftsmen; the chief reason why more of them have not been employed is that it takes time to train them. There remains the class of industry in which wages are "high" and no other obstacle to expansion exists; in these the lowering of wage rates to the level of rates in the depressed unsheltered trades would lessen the attractiveness of the expanding industries and check the movement of labour to them. Why should a Tyneside fitter go to the trouble and expense of moving his household to Coventry if his wages in a motor works will be no higher than they were in a shipyard?

V

To sum up; the connection between wage levels and unemployment is complicated by a number of other factors which differentiate the post-war from the pre-war industrial situation, and render it a dangerous abstraction to isolate one factor and

attribute to it the whole of the present abnormal unemployment. The maldistribution of labour brought about by the war is a more important cause of unemployment, the influence of which has been limited by the lowering of wage rates in the overcrowded industries and is being reduced by a fairly rapid spontaneous redistribution of labour. And the same factor in the problem, the uneconomical distribution of labour, so affects the productivity of industry that it reduces the average wage that can be paid without causing unemployment. Some of the material cited has a bearing also on the problem of subsidies and their effect, to which in conclusion a reference may be made.

Whatever may be the process by which it is being done—and the theory of employment is perhaps as difficult a branch of Economics as the theory of unemployment—there seems no doubt that the population in excess of requirements in the depressed industries is finding employment elsewhere. The unemployment situation is not stationary. A comparison between the two years 1923 and 1927, neither of which was disturbed by coal stoppage or important monetary change, shows a reduction in unemployment from 11·7 per cent. (average of year) to 9·7 per cent., and an increase in the absolute number of employed in the insured industries of 3·2 per cent. This reduction of unemployment has been associated not with a fall, but with a slight rise in real wage rates; it is due no doubt in part to the influence of new savings and increased efficiency, to which Professor Pigou refers, but much more to the shift of labour indicated above. While the circumstances are in many respects different, the rapid recovery of American industry since 1920 may be referred to as a parallel movement, since it has been associated with a continuous and great rise in real wages.

It is, however, impossible to find out from the figures at our disposal whether the power of absorption shown by industry as a whole, even at the present average level of wage rates, is inherent in industry, or attributable mainly or entirely to the action of Governments in stimulating the development of selected industries by protective tariffs and subsidies. The chief index of expansion that we have, the growth in the numbers insured in different industries under the Unemployment Insurance Acts, is consistent with the influence of this factor. To protection may be attributable a part, at any rate, of the increase by 47·6 per cent. between 1923 and 1927, in the numbers employed in Silk and Artificial Silk, by 21·4 per cent. in the Motor industry, by 38·1 per cent. in the manufacture of Scientific and Photographic Instruments.

The Housing subsidies show their influence not only in a 20·5 per cent. expansion of the Building and Contracting industry, but also indirectly in the even greater expansion of the building material industries, Furniture and Upholstering, Electric Wiring, Heating and Ventilating Engineering, Wall-paper Manufacture and Paint and Varnish Manufacture. The vast expenditure of public funds upon road improvement, coupled with the development of Housing, similarly helps to explain the expansion of Road Transport and Constructional Engineering. At the same time it is highly improbable that none of this expansion would have taken place without Government help. Messrs. Courtauld's profits probably had an influence in stimulating enterprise in the Artificial Silk industry not less than the protective tariff. Houses were needed, and would have been built in large numbers without any subsidy. The Motor industry expanded as rapidly in the interval during which it was unprotected as before and after. The Distributive Trades, Electrical Engineering and other smaller industries have expanded without assistance. The large Coal Subsidy probably prevented a necessary contraction in the Coal-mining industry from coming so soon or going so far as it is likely to do, but it could not prevent a 10 per cent. contraction in the twelve months after it ended.

For another reason the recorded growth of the protected and subsidised industries is indecisive. Our index records only the primary effect (if it is the effect) of Government action; it gives no indication of the secondary and indirect effects. We should expect that partial protection, by obstructing the imports with which foreigners purchase our exports, would have an unfavourable reaction on export industries. In fact unemployment and depression are most marked in the chief export industries. Subsidies have to be paid by someone; the cost of the subsidies to expanding industries may be a partial explanation of the difficulties of the industries that are contracting employment. Certainly the various protectionist expedients and subsidies were not introduced as parts of a considered and co-ordinated policy of post-war reconstruction. If, as Professor Pigou suggests, such a policy is beyond the capacity of any Government the country is likely to get, it would be safer to confine Government intervention to the negative policy of relieving industry of burdens that press with different weight on different industries, and removing obstacles to the spontaneous re-orientation of industry and redistribution of labour that is all the time going on.

HENRY CLAY

THE ECONOMIC EFFECTS OF ADVERTISEMENT

THE costs of production may be divided into two parts; namely, the costs of manufacture and the costs of selling. Under modern conditions many, and probably the majority of, goods cost as much to market as they do to manufacture; while in some cases selling costs amount to as much as three, four, or even five times the cost of manufacture. These selling costs are made up of the expenses of all middlemen and of those expenses which the producer incurs, over and above the cost of manufacture, in the process of selling his goods. Now certain of these costs are expenses inevitable to the transfer of commodities from producer to consumer. They represent additional services rendered in making the goods accessible to the retail buyer: the goods would not be forthcoming in the form and at the places desired by the consumer unless the price paid by him was sufficient to cover these costs. They form part of what may be called the "true supply price" of the commodity. Such "true" selling costs may be divided into four groups: (1) the costs of transport, (2) the costs of preparation, sorting and grading, (3) the costs of holding, and (4) the cost of information or getting into touch with buyers.

(1) Costs of transport are a necessary consequence of specialised and large-scale production.

(2) The necessity of packing, sorting and grading arises from the fact that goods are produced in bulk, and must be divided up into small parcels suited to the needs of consumers. Goods which are distributed through wholesalers and retailers may be sorted, packed and divided into smaller lots three or more times before they reach the consumer. Some goods, especially perishable commodities, have to be graded and further prepared by one or more of the distributors before they are ready for sale to the consumers.

(3) The costs of holding include the cost of warehousing, the cost of financing stocks and the cost of risk-bearing. Their amount is determined partly by the bulk, value and durability of the commodities and partly by the length of the holding period. This period (which elapses between completion at the factory and sale to the ultimate consumer) varies greatly with different

commodities. Its duration is largely determined by the degrees of irregularity in the supply and demand for the commodity, since irregularity in either of these factors necessitates the holding of reserve supplies. Partly it is determined by the extent to which traders succeed in securing rapidity of turnover without thereby sacrificing volume of turnover.

(4) The cost of bringing buyer and seller together, or the cost of information, is that which has to be paid in order to co-ordinate demand and supply when specialisation and large-scale production have separated producer and consumer. This co-ordination is usually secured through the services of retailers and wholesalers. Retailers announce available supply to consumers and wholesalers get into touch with the appropriate retailers in each district. Part of the payment received by both wholesaler and retailer is remuneration for this service of information. Occasionally the wholesaler's sole function is the provision of information, since in some cases he does not handle goods at all, but acts merely as a broker between producer and retailer. In this case the whole of the costs incurred by him are information costs. Information may, however, be provided otherwise than through the ordinary wholesaler and retailer channels. On the one hand, its costs may be borne directly by the consumer (as when a housewife advertises for a cook or a government office for tenders), while on the other hand it may be provided by the producer through travelling salesmen and printed advertisement. Now this sort of advertisement, which merely conveys information as to available supply, is a "true" selling cost, since, like holding and transport costs, it is the payment for a service indispensable to the marketing of commodities. It is only an alternative—and often a cheaper—form of providing that necessary service.

It is therefore different in nature from what I propose—during the course of this paper—to call advertisement costs. For there is an important distinction to be made between "true" selling costs and those advertisement costs which are incurred either by producer or middleman with a view to increasing the sale of a commodity. "True" selling costs are as indispensable a part of the final price as are the costs of manufacture; and if they were not undertaken by the seller, they would have to be borne directly by the consumer. Advertisement cost, however, represents expenditure by the seller, not in putting the goods on the market, but in inducing the buyer to accept them. Without this expenditure it would be impossible to market the same amount of goods, not, as in the former case, because the supply would not

be available where it was required, but because the demand curve would be too low.

In the pages which follow all expenditure of this latter type will be considered as expenditure on advertisement. That is to say, expenditure on advertisement is expenditure (over and above the costs of producing and transferring the commodity to the consumer) which is incurred by the seller with a view to increasing the sales of his commodity.[1] Thus, in addition to the cost of printed advertisement, it includes expenditure on travelling salesmen, "free offers," competitions, coupons, window displays and other devices for attracting buyers. But it does not include those information costs which the separation of producer and consumer has made indispensable to the marketing of commodities. In practice, of course, it is extremely hard to draw the line between advertisement which is merely an alternative way of providing information and advertisement which aims at increasing demand. Few advertisements, however, confine themselves entirely to the mere announcement of supply, and the vast majority are aimed almost exclusively at "creating demand." It may be said roughly, that where a commodity is marketed through the ordinary wholesaler-retailer channel, there is a *prima facie* case for considering all expenditure on advertisement as an advertisement cost and not as a "true" selling cost. And where the commodity is marketed directly from producer to retailer, any expenditure above what would normally be paid to the wholesaler for his function as broker, may be considered as an advertisement cost.

Now advertising expenditure as thus defined aims at increasing sales by affecting the mind of the consumer.[2] By various appeals it induces him to change his subjective valuation of the commodity. Thus the marginal utility of the commodity is increased and the demand curve raised. Consumers are persuaded to buy more of it at the same price, the same quantity at a higher price, or even

[1] Of course a producer may try to increase his sales by improving the quality of the commodity which he sells, or by increasing the services which he supplies with the commodity, or by producing something more adapted to the needs of the consumer. The costs of such improvement are not to be considered as advertisement costs, for they form part of the supply price of a commodity different from the unimproved variety. Competition by quality and competition by advertisement are different things, although in particular cases it is not always easy to distinguish them. In the former case the seller tries to supply the consumer with what he wants, in the latter he tries to persuade the consumer that he wants what the seller can supply.

[2] Some advertisement is addressed by producers (and occasionally also by wholesalers) to the retailer and not to the consumer. Such advertisement attempts to persuade the retailer of the "saleability" of the advertised commodity.

in some cases more of it at a higher price. Such expenditure, directed as it is towards changing the demand curve, cannot properly be considered as forming part of the "true" supply price of the commodity. It is a sum arbitrarily added by the seller to "true" costs of production, which sum he is able to extract from the consumer because its expenditure increases the marginal utility of his products.

Consequently with advertised commodities it cannot be said in any useful sense that price tends to equal the cost of production. For the price does not tend to be equal to the "true" cost of production of the commodity, but to that amount plus what the producer thinks it worth while to add in the way of advertisement costs. We shall see later that advertisement may affect the cost of manufacture and "true" selling costs, and that therefore the final price of the commodity may be lowered although the total supply price includes the cost of advertisement. But the point I want to make here is that the sums spent on advertisement are not on a par with other costs, and cannot be considered as part of the ordinary cost of production of the commodity.

It may here be objected that advertisement costs are payments for service as much as are the "true" selling costs—namely, the service of education, which bears fruit in the new valuation of the commodity arrived at by the consumer. It is sometimes claimed that advertisement raises the standard of life and educates the public by increasing their wants and pointing out to them the use and desirability of the advertised commodities. Consequently it could be argued that advertisement costs are as much a part of the "true" cost of production as are the other selling costs. This might be true, I think, if advertisement were indeed educative; that is to say, if it put before the consumer such detailed and truthful information as would assist him in making a more correct judgment of commodities. By a correct judgment I mean one where the relative valuations put by an individual on different commodities closely correspond to the relative satisfactions which in practice he will obtain from them. Such a judgment could only be reached if the consumer had knowledge of all the commodities available, of their uses and properties, their relative merits and adaptability to his needs. In a world without advertisement the consumer would be ignorant of many commodities which would satisfy his needs, would not know all the uses of others and be blind to the merits of many. Some commodities he would undervalue through ignorance, while others he would

overvalue through custom or prejudice. But in a world where sales are largely obtained by means of advertisement, are his judgments likely to be more correct? Does advertisement offer him such truthful and reasoned information that his valuations correspond more closely than they otherwise would do to the satisfactions obtainable from commodities? I do not think that it does. We shall see later how advertisement can persuade him to prefer one make of a commodity to other makes of equal quality, and to pay more for it; and how it can often induce him to buy inferior goods. Arguing from results there seems no reason to suppose that advertisement assists his judgment, and a study of advertisements leads to the same conclusion. Advertisements are not written to help people make a reasoned choice of commodities, they are written with the object of inducing them to buy particular things, and they naturally exaggerate the uses and merits not only of the commodity but of a particular make of the commodity. Moreover, the vast majority of advertisements do not confine themselves to pointing out the uses of commodities; they make their appeal not to the reason, but to the emotions, of the consumer. Suggestion, reiteration, attractive illustration—these are all devices to induce him to buy the article without making comparisons and calculations. They certainly do not assist his judgment as to the relative satisfactions to be obtained from different commodities or as to the relative satisfactions to be obtained from commodities and leisure.

A possible exception to this conclusion is the advertisement of inventions or new commodities. It is undoubtedly true that advertisement has brought popularity within a short space of time to some useful commodities, which, without it, would have taken much longer to penetrate into common use. Striking examples of these are vacuum cleaners and safety razors. In these cases advertisement has certainly performed an educational service. But if we take into account all the new commodities introduced by advertisement it seems very doubtful whether over the whole field any such service has been performed. For while some of the new commodities advertised are more adapted to the needs of consumers than those which they replace, others are less well adapted, while still others differ little from the old but are able (by virtue of advertisement) to command a higher price. On the whole, therefore, it does not seem necessary to make an exception of the advertisement of new commodities, and it seems reasonable to conclude that the set of judgments entertained as a result of advertisement is on the whole less likely to be correct

than that which would have been entertained without advertisement.

Consequently there appears to be no ground for saying that advertisement costs, which persuade the consumer to adopt this new set of judgments, are conferring an educative service and are therefore of the same nature as true selling costs. They are of quite a different nature. When a consumer buys an advertised commodity, part of the price which he pays represents the cost of manufacture, part the cost of selling and part the cost of persuading him to make the purchase. Now while the first two parts make up the "true" cost of production of the commodity, the last part--the advertisement cost—may be considered as the cost of adding an artificial value to the goods concerned. It makes up (as it were) the supply price of an immaterial commodity which I will call "reputation." Consumers who, by advertisement, are induced to increase their purchases of advertised goods, do so because the marginal utility of the commodity has been raised for them, or we may say that with the original commodity they choose to buy this new immaterial commodity—reputation. The cost of creating reputation becomes part of the price of commodities and forms a considerable proportion of what are ordinarily called selling costs.

When we consider these facts, it becomes evident why marketing costs account for such a large proportion of the final price of commodities. For obviously it would not be worth while for the seller to incur the costs of advertisement if he did not recoup himself out of the returns which he gets for his sales. That is to say, the final price paid for the commodity by the consumer must be sufficient to cover its true costs of production plus the cost of advertising. There are two ways in which this may be brought about. Firstly, the demand curve for the commodity (or of the brand plus its reputation) may be raised by an amount at least equal to that by which the cost curve has been raised, when we consider the cost curve as made up of "true" costs plus advertisement costs. That is to say, the advertisement may be so successful in raising the consumers' demand for the commodity together with its manufactured reputation that they are induced to pay a price for the commodity high enough to cover advertisement costs. Secondly, where increasing returns prevail, advertisement, by increasing the scale of output, may so reduce production costs and true selling costs that the economies from these two sources may cover and more than cover the expense of the advertisement.

Thus advertisements and advertising campaigns fall into two important divisions, those which raise prices and those which do not raise prices. From the social point of view the effects of the two types are widely different. But cutting across these two divisions two further distinctions must be noticed: namely, advertisement which is competitive within the trade, and advertisement which is not competitive within the trade but which aims at increasing the total demand for a particular commodity. Advertisement which has the latter aim in view is usually conducted either by a group of producers or by a single producer who has a considerable degree of monopoly. This form of advertisement—non-competitive within the trade—has recently become of increased importance. Many monopolists now find it worth while to advertise; and co-operative advertising—the first example of which was conducted in 1908—is now undertaken by a number of producers' associations. Sometimes these campaigns of associated producers result from the rivalry of other industries; for instance, the American Face Brick Association had a co-operative campaign because their industry was threatened by propaganda advocating the use of lumber throughout the building of a house. Other associated campaigns have been undertaken to lengthen the selling season. The Greeting Cards Association and the Walnut Growers' Exchange both conducted campaigns to extend their sales beyond the holiday season. In other cases co-operation has arisen merely from the realisation that advertising can increase sales not only by transferring them from one producer in the trade to another, but also by greatly increasing the total consumption of a commodity. In addition to this form of advertisement, non-competitive within the trade, it sometimes happens that advertisement which is competitive in aim is not so in effect. Often the advertiser gains more from increased consumption than from the diversion of his competitors' business. Indeed it happens occasionally that an advertiser increases not only his own sales but those of his rivals as well. For instance, the manufacturer of a health product says that his sales increase whenever his rivals conduct an advertising campaign, and the advertisements of vacuum cleaners are said to have increased the sale of brooms and carpet sweepers. On the other hand, not all the advertisement of monopolists must be included in non-competitive advertisement, as sometimes the advertisement of a monopolist aims at increasing the demand—not for the whole of his output—but for those of his brands which are the most highly priced or which are the most profitable. Thus from 1903 to 1910,

when the American Snuff Company had an almost complete monopoly of snuff in America, they concentrated their advertisement on pushing the sales of their more expensive brands.

Now competitive advertisement may fall into my second division of advertisement—that which does not raise prices, by bringing increasing returns to one producer, if the optimum size of business is larger than he would have obtained without advertisement. For, as we shall see, it is often possible to attract customers by advertisement where they would not have been attracted by lower price. On the other hand, some advertisement which is not competitive within the trade may fall into my first division of advertisement—that which raises prices. This fact is sometimes obscured in those cases where the advertiser accepts a lower profit per unit in order to pay for advertisement. For then, advertisers argue that the advertisement is paid for out of profits and not out of the pocket of the consumer. But this is not the case. By accepting a lower rate of profit per transaction and spending the balance on advertisement, the producer is able to gain a larger total profit from his increased turnover. The demand curve is raised by advertisement and the cost curve (including advertisement costs and profits) remains the same as before, so that a greater amount of the commodity is sold at the same price per unit. But, if the advertiser had obtained the increased sales without advertising, he could have sold his goods at a lower price and still have made the same total profit as he does when he spends upon advertisement. The fact that in many cases he is not able to increase his sales by offering his goods at a lower price, while he is able to do so by advertisement, is merely further evidence that competition by advertisement is more effective than competition by price. And the consumer who is persuaded to buy, through advertisement, what he would not have purchased at a lower price, has to pay for the advertisement, not in a price directly raised, but in one greater than it need have been. He is in effect purchasing reputation.

Thus, whether advertisement is or is not competitive has little bearing on the effect of that advertisement upon price. All that can be said is that competitive advertisement is probably the more expensive of the two, since the advertiser has to create a reputation in the face of the advertisement of rival brands. And direct competition with rival producers of the same commodity tends towards a cumulative increase of advertising expenditure. But, except for the question of increased costs, it becomes obvious that the division between "competitive" and "constructive"

advertisement is not of fundamental importance when we consider that (taking production as a whole) all advertisement is competitive. For, in order that he may buy more of an advertised commodity the consumer must buy less of something else. And the shift in demand brings about a shift in production such that the national dividend is made up of an increased amount of that commodity whose marginal utility has been increased, and of the reputation created for it by advertisement; but it contains less of the commodities from whose production resources have been drawn to provide both the increase and the advertisement. We may, however, imagine the case in which all commodities are advertised so successfully that all subjective valuations are increased. Obviously they cannot all be increased with regard to each other or with regard to money, for this would have no meaning. But they might all be increased with regard to leisure —that is to say, that the balance between the marginal disutility of effort and the marginal utility of commodities might be so altered that people would be induced to put forth rather more effort in order to obtain more commodities. It would follow that the national dividend would be increased and the increase would be made up of the extra commodities produced, together with a great deal of the immaterial commodity—reputation. Of course it is not really possible that advertisement could raise all marginal utilities by the same amount; so that in this, as in other cases, the ratios of exchange between commodities would be altered by advertisement, and consequently the distribution of resources between various productive enterprises would be varied too. But it may well be that advertisement, by continually bringing to people's notice the uses and merits of a number of commodities, has so increased their wants that the balance between the disutility of effort and the utility of goods has been altered.

We may consider, therefore, that all advertisement is competitive, either between commodities or between commodities and leisure. And the distinction which is of importance to economic welfare is the distinction between advertisement which is paid for directly by the consumer in a higher price and advertisement which brings such economies as to pay or more than pay for its cost. Let us first consider the cases where there are no reactions on the cost of producing the commodity, or where the economies from the larger output produced with advertisement are insufficient to cover the cost of the advertisement. The result of the advertisement is that the cost of production of the commodity is raised by the amount of the advertisement costs

(or by that amount less any economies), and the demand curve for the commodity is raised by an equal or greater amount. Or, if the advertisement is entirely competitive, the demand curve for a particular brand of the commodity is raised. In the latter case the same amount of the commodity is bought as before and a greater total sum is spent upon it. The result of the advertisement has been merely to transfer demand from one producer to another, while the prices of the successful producer are greater than those of his competitors because of his expenditure on advertisement. The consumer is willing to accomplish this transfer because he prefers to buy not the commodity only, but also reputation. Thus, where competitive advertisement brings no (or insufficient) economies in other costs, some of the country's resources are diverted from the production of ordinary commodities and services to the production of this immaterial commodity—reputation. So that the national dividend is made up of rather fewer other goods and services and rather more reputation than would have been the case had there been no advertisement.

If (and this is much more usual) the advertisement is not wholly competitive within the trade, the increased sales of the advertising firm come not only (or possibly not at all) from the decreased sales of its direct competitors, but from the increased purchases of that particular commodity by the public. Then, where advertisement does not bring economies, the total sum spent upon the commodity is increased in greater proportion than the increased sales. A larger amount of the country's resources are devoted to its production than before, in addition to resources (amounting to the cost of advertisement) which are directed to the creation of its reputation. This comes about because the marginal utility of the commodity plus its created reputation has been increased, and therefore the ratio of exchange between the advertised commodity (plus its reputation) and goods generally has been altered in favour of the advertised commodity. Consequently resources are diverted from other uses to produce the commodity and the reputation. Now, where advertisement has brought about such a shifting of resources and a greater production of the advertised commodity, we are bound to say that the national dividend has increased, because the shift has taken place in order to produce a set of commodities which advertisement has induced people to consider more valuable than those which were previously being produced. Economics only takes into account the fact of subjective valuations as shown by the prices paid, and does not consider whether these valuations are justified. Therefore, if

people think that the set of commodities produced by the new distribution of resources is more valuable, then it is more valuable, and the national dividend is increased. Whether, however, economic welfare is increased by the redistribution is a different matter. If it were probable that the new set of valuations produced by advertisement would be more nearly correct than the old, then it might be worth the community's while to direct some of its resources to the creation of reputation, in order to bring about a grouping of resources corresponding to the new set of valuations. But, as it seems to me likely that the valuations arrived at by advertisement are less correct than those which would otherwise have obtained, I contend that the community loses in two ways. Firstly, by the production of a set of goods and services (other than reputation) which are less adapted to its needs than those which would otherwise have been produced; and, secondly, by the diversion of resources to the production of reputation. Therefore, unless reputation itself is of social value (and I shall put forward arguments showing that it is not), there seems reason to suppose that advertisement which does not bring economies equivalent to its cost is directly harmful to economic welfare.

The case is different when we come to consider the second way in which the cost of advertisement may be covered; that is, where economies in other costs (resulting from the larger output) cover or more than cover the cost of the advertisement. In such cases there is no diversion of resources from other uses to the production of reputation, since its cost is covered by economies, and the effect of the advertisement on economic welfare depends upon whether the new set of commodities produced as a result of advertisement is more or less adapted to the needs of consumers than the old. Obviously economic welfare will be increased if the total cost of producing the larger amount of a commodity sold with advertisement is equal to or less than the total cost of producing the amount which would have been produced without advertisement. This, however, is extremely unlikely to occur; and it is probable that with advertisement a larger total sum will be devoted to the purchase of the commodity than would have been the case without advertisement. There will then be a transfer of resources from other uses to the production of the advertised commodity. If we consider that the new set of valuations resulting from advertisement are less likely to be correct than the old, the consumer may or may not benefit from this transfer. He will benefit from it so long as the excess of the total price paid

for the amount produced with advertisement over the total price paid for the amount produced without advertisement is no more than the total utility of the additional units. In other words, since with the new demand curve some units are produced at a price exceeding their utility as shown by the old demand curve, the consumer will gain so long as the total amount of the excess is less than the saving on the original units together with the consumers' surplus on those additional units whose price is less than their utility.

Now where economies in other costs exactly balance the cost of advertisement, the price will be the same with advertisement as without it, while a greater amount of the commodity will be produced. In this case all the additional units will have been produced at a price greater than their utility as shown by the old demand curve. Therefore, if the old set of valuations is correct, the consumer is bound to lose where the addition to costs made by advertisement is equal to the economies resulting from larger output. But, where advertisement brings about a considerable reduction in price, the consumer is very likely to gain; since even a small reduction in price over the whole output is likely to offset the loss on those units which are produced at a price greater than their utility, unless this loss is very great. Other things being equal, this loss will be greater the greater is the increase in output due to advertisement, and the more inelastic is the original demand curve. On the other hand this loss is more likely to be offset the greater is the decrease in price brought about by advertisement.

In practice it appears that considerable price reductions have in many cases resulted from the increased output which advertisement has made possible. Indeed it is probably true to say that advertisement has played a great part in facilitating the production on a large scale of many semi-staple commodities, and in rendering possible the economies of standardisation and mass production. In addition to increasing the scale of output, there are various other economies which may be brought about by advertisement. Firstly, advertisement tends to introduce a considerable uniformity in demand. Thus variations necessary to suit special tastes are reduced, and a higher degree of standardisation is made possible. Secondly, advertisement may sometimes be used in such a way as to adjust the demand for a commodity to the supply available at the factory. And thirdly, there are various important economies in selling costs which may result from advertisement, and which, in some cases, may of themselves be sufficient to cover the cost of advertisement.

It is clear, therefore, that considerable economies may result from advertisement, and in consequence considerable price reductions. In all such cases there is a great probability that the immediate effect of advertisement will be to produce a set of commodities which will yield a greater total satisfaction than those which would have been produced without advertisement.

We may conclude that, whereas advertisement which raises price is directly harmful to economic welfare, the immediate effect of advertisement which lowers price may in many cases prove beneficial.

Where the increased output of the advertised commodity comes about through increased effort (whether or not the price is raised by advertisement), there need be no withdrawal of resources from other uses. In such cases the national dividend is undoubtedly increased by the advertisement, but we are left doubtful whether the re-valuation of leisure and commodities brought about by advertisement is any more likely to be beneficial than the re-valuation of commodities discussed above.

The indirect effects of advertisement remain to be considered. These are of particular importance in that the success of advertisement is based upon its power to restrict competition, and its use brings great changes into the conditions which determine value. Under conditions of perfect competition producers would gain nothing by spending money on advertisement, for those conditions assume two things—(1) that the demand curve is fixed and cannot be altered directly by producers, and (2) that since producers can sell all that they can produce at the market price, none of them could produce (at a given moment) more at that price than they are already doing. In practice, of course, there is no such thing as perfect competition, and, even where advertisement is absent, these assumptions are never completely fulfilled. But in a world where advertisement is largely used, they cease to correspond, even remotely, to the facts. For, in the first place, the marginal utility of commodities can be considerably altered by advertisement and, by spending sufficient money, producers can raise the demand curve, either for a group of commodities, a single commodity or a particular brand of a commodity. And, in the second place, the prevalence of advertisement makes it increasingly difficult for a manufacturer who does not advertise to find purchasers for his goods, even though he produces the standard quality at the market price. A manufacturer who does not advertise may be able to quote a price to wholesalers as low as, or even lower than that of his competitors,

and yet be unable to obtain a market for his goods. This has come about because price and quality by themselves have ceased to be effective methods of competition. Wholesaler, retailer and consumer no longer buy in the cheapest market, in reliance on their own judgment of quality. For in buying to sell again, wholesaler and retailer have first to consider "saleability," and they find that the consumer buys, not the cheapest goods of their kind and quality, but those for which a reputation has been created by advertisement. Advertisement affects the consumer's judgment of commodities and his desire for them to a degree which it is hard to realise. We find that, on the one hand, he will often fail to buy goods which are offered below the market price if they have not been brought to his notice and their merits dinned into his ears by advertisement; while, on the other hand, his consumption can be enormously increased by advertisement, even though the advertised product may be more expensive than an unadvertised variety of the same commodity. Goods for which a reputation has been created can be sold even if their price is above that of similar goods in the same market. Goods whose name is unknown may be unable to find a market, even though in price and quality they compare favourably with the advertised commodity. Consequently, the problem for the manufacturer is becoming less and less the amount that he can produce at a given price and more and more the amount that he can sell. And the amount that he can sell depends largely on his ability to create a reputation for his product. Thus it comes about that the price of many commodities is made up, not only of manufacturing and true selling costs, but also of the cost of creating reputation.

In almost every trade to-day we find that such advertisement costs are incurred. A few manufacturers spend money on advertisement in order to increase their sales, and their rivals are forced to follow suit. If they do not do so, their goods may be cheaper than the advertised goods (since their price does not include the cost of creating reputation) and yet they may be unable to attract consumers. Frequent examples of this anomaly may be found. I will quote a few.

The manufacturer of a health product which is very widely sold spends considerable sums on advertisement. His selling price is 14 per cent. above that of one of his rivals who makes smaller profits and advertises very little. Both firms have been established for some time, the manufacturing costs of the two are not widely different and there is little to choose in the quality

of their products. But the manufacturer who does not advertise sells practically nothing outside his immediate neighbourhood, and his annual sales amount to little more than the amount which the advertising manufacturer sells in eight days.

A well-known soap-flake which is a branded article costs £150,000 per year to advertise. The price of two unadvertised soap-flakes is considerably less (one of them by more than 50 per cent.) than that of the advertised product. Chemically there is absolutely no difference between the advertised product and the two unadvertised soap-flakes. Advertisement alone maintains the fiction that this soap-flake is something superfine. If the advertisement were stopped, the product would become merely one of a number of soap-flakes and would have to be sold at ordinary soap-flake prices. Yet the success of the undertaking, from the producer's point of view, may be seen from the fact that this product brings in half a million net profit per year.

A manufacturer of shoes found that though the shoes that he produced were ten to fifteen shillings cheaper than X shoes—a widely advertised brand—and were of as good a quality, his sales were far below those of the X brand. When he consulted an advertising expert, he was recommended to add ten shillings to the price of his shoes and to spend his portion of the increase on creating a reputation for them. 65332

Examples such as these could be multiplied indefinitely. Reputation restricts competition between goods which may be dissimilar only in name, by attracting the attention of the consumer to the advertised commodity to such an extent that he ignores the prices and merits of other similar commodities. In other cases we find that the advertised commodity is indeed superior to its rivals, but that advertisement induces consumers to bear a difference in price out of all proportion to the difference in quality. For example, Bayer's Aspirin was before the war an advertised proprietary article.[1] Aspirin is a trade name for acetyl salicylic acid, which before the war was sold in bulk for about 2*s*. per lb. The price of Bayer's Aspirin was about 18*s*. per lb. (less various discounts). It is extremely improbable that the extra care with which Bayer's Aspirin was prepared entailed a difference in cost at all proportionate to the difference in price between the proprietary article and the commodity sold in bulk.

Advertisement can only effect this restriction of competition where the advertiser can establish before the public the identity of his commodity, and connect it in their minds with his advertise-

[1] *Standing Committee for the Investigation of Prices:* Cmd. 633.

ment. The diversion of demand from the advertised commodity to its rivals—known in America as the "substitution evil"—is the greatest difficulty with which the advertiser has to contend. Probably in no case can the diversion be completely eliminated, but it can be greatly reduced by the use of brands and trade marks. These devices aim at securing for the advertiser the main benefits of his advertisement. For branded goods can be brought to the public notice and identified in a way which is not possible with goods sold in bulk. They have an individuality such that the reputation created is connected in the consumer's mind not with the commodity only, but with the brand. It is for this reason that the increase in advertisement has been accompanied by a great increase in the number of branded goods, trade marks and proprietary articles. A growing number of goods which were formerly sold in bulk are now sold as branded goods and are advertised nationally. Tobacco, groceries, drugs, sweets, paint are a few of the more obvious examples. Such commodities can be put in distinctive packages, branded and labelled in such a way that their individuality can easily be established. With goods sold by the yard or ready-made clothes this is less easily accomplished, but even with such things producers are now attempting to make their brand or trade mark a distinctive feature of the commodity. By these means they are able to tie up their advertising with their own products, and to ensure that, when they incur advertisement costs, the increased demand will be directed, not to the commodity as a whole, but to their particular make of the commodity. Thus they are able to secure for themselves, if their advertising is successful, a partial monopoly based on reputation which it is not possible to secure when goods are sold in bulk. For with bulk goods retailer and wholesaler buy in the cheapest market, and, though ruled to a certain extent by their connection with particular manufacturers, are prepared to deal with any producer who can offer them a cheaper source of supply. And this is exactly what the manufacturer of proprietary articles wishes to avoid. Advertisers maintain that the manufacturer of bulk goods is competing with others on the basis of manufacturing cost alone, so that the moment somebody else can make goods cheaper than he can he loses his business and is left with no selling organisation and no reputation.

This attitude shows very clearly the object of the manufacturer of branded goods. Such a manufacturer hopes by national advertisement to establish a reputation for his brand such that

the consumer demands not the commodity in general, but the particular make to which reputation is attached. The result is that competition from other brands or from an unbranded variety of the commodity is indirect. Such goods may be offered more cheaply, but they are looked upon as other commodities—substitutes perhaps—but not as the same commodity at a lower price. So long as the consumer insists on the commodity plus the reputation, and so long as the producer succeeds in tying the reputation to his own products, a partial monopoly is established against which competition by price alone is ineffective. As an increasing number of manufacturers in all trades resort to the advertisement of proprietary articles, each market gets split up into a number of these reputation monopolies, and it becomes more and more difficult for a manufacturer who does not advertise to find an outlet for his goods. Moreover, the position of the successful advertiser is strengthened by the fact that reputation is costly to create, and becomes progressively more costly as an increasing number of manufacturers resort to advertisement. For the louder the chorus which already assails the consumer, the more difficult and expensive does it become to bring any particular appeal to his attention. The manufacturer in any trade who succeeds in creating a reputation obtains a certain monopoly advantage, and his rivals, finding the difficulties of marketing enhanced, have in their turn to incur advertisement costs. But, since they have to create reputation in the face of one already established, the probability is that their advertisement costs will be heavier than those of the original manufacturer. This will again react on him and tempt him to incur still more considerable expenditure. Thus the process is cumulative, and the amount spent upon advertisement tends continually to increase. This tendency is accentuated by the fact that a growing number of producers in all trades are adopting the use of advertisement. A manufacturer who wishes to increase his sales by advertisement has to compete not only directly with those in his own trade who have created reputation monopolies, but also indirectly with all those in other trades who, by their advertisement, are bidding for the attention of the public. As an illustration of the increasing cost of advertisement the estimates of various national advertisers are of interest. They give figures varying from £25,000 to £40,000 as the annual cost of "a fair degree of publicity," which before the war could have been obtained for £10,000.

Thus the indirect effects of advertisement are the restriction of competition by price and quality, and the establishment of

reputation monopolies whose strength is accentuated by the cost of advertisement. And these indirect effects are likely to be more harmful than the direct effect of advertisement on prices, because where the advertiser establishes a reputation monopoly the difference between the price of advertised and non-advertised goods is not limited to the cost of advertisement. So that even where advertisement lowers costs the consumer may not get the benefit of the reduction or may get less than the full benefit.

But, while the general trend in industry appears to be towards the increase of proprietary articles and the extension of reputation monopolies, it is interesting to note the growth of a movement in the opposite direction. This may be observed in the policy of certain large-scale retailers. These firms prefer to deal in non-proprietary articles which they purchase themselves on the open market or have manufactured for them. In these purchases they prefer to rely on their own judgment rather than on the reputation manufactured by producers. Working on a large scale they are specialists in buying, and their aim, like that of the purchaser of bulk goods, is therefore for cheapness and quality rather than for reputation. In this way they tend to restore competition between manufacturers and to oppose the monopoly of branded goods. They do not, however, dispense with reputation altogether as a factor in marketing. For the reputation of these large shops themselves is one of the means by which they are able to secure volume and rapidity of turnover. But, on the whole, they base their appeal to the public more upon the price and quality of their goods than upon the reputation created by advertisement. Moreover, when they do advertise, they aim at creating the reputation of the shop rather than that of particular commodities, and in doing so they do no more than is done by most large retailers. For those retailers who sell branded goods also advertise their own establishments, so that in their case there is a double set of reputations involved, a double set of advertisement costs and a limitation of price competition at two stages of distribution. For in buying goods, such retailers are influenced more by reputation than by price or by quality, while in selling they rely partly on the reputation created for the goods by the manufacturer and partly on the reputation which they themselves create for their house. Whereas the large retailers, who make a practice of selling non-proprietary articles, in buying rely on price and quality, and in selling rely on their own and not upon the manufacturers' reputation. Thus the importance of

this movement lies in the fact that, at one stage of distribution at least, it restores competition and opposes the reputation monopolies of producers.

While advertisement on the one hand tends to stimulate the growth of monopoly, on the other it changes the monopolist's problem. For the restriction of supply is no longer his sole method of obtaining a price per unit higher than that which would have been brought about by competition (without advertisement). Advertisement enables him to raise the demand curve; and, though he will not produce as much as would be produced with the new demand curve under conditions of free competition, his production will be greater than that which would be produced by monopoly without advertisement—and it may possibly be greater than the output under conditions of free competition without advertisement. It can be proved, if we make the assumption that advertisement raises the demand and supply curves by constant amounts throughout (and the former more than the latter), that the monopolist gains by advertising and that the maximisation of monopoly revenue with the new demand curve entails an output greater than that which would have been brought about by the maximisation of monopoly revenue with the old demand curve.

But while the monopolist gains by raising the demand curve, rather than by restricting supply without raising the demand curve, what is the consumer's position? On the assumption that his old valuations were more correct than his new ones, it is obvious that, when the price fixed by monopoly with advertisement is not lower than the price fixed by monopoly without advertisement, the consumer loses, since the total utility of any additional units produced as the result of advertisement must be less than the price paid for them. For the price which would have been fixed by the maximisation of monopoly revenue without advertisement would have been equal to the utility of the last unit then produced, and the utility of any additional units must be less than this and therefore (where the price is not lowered) less than the price paid for them. One cannot say in general whether the maximisation of monopoly revenue when advertisement is used is likely to entail a price higher than that brought about by the maximisation of monopoly revenue without advertisement.[1]

[1] With the above assumptions it can be shown that, where the demand and supply curves are straight lines, the price appropriate to monopoly with advertisement will certainly be greater than the price appropriate to monopoly without

In those cases where the price fixed by maximising monopoly revenue with advertisement is lower than that appropriate to the maximisation of monopoly revenue without advertisement, there is a possibility that the consumer might be better off under the former arrangement. He would be so in those cases where the reduction of price on the original units together with the consumer's surplus on those units which (under monopoly without advertisement) would not have been produced at all, is greater than the loss on those units which are being produced at a price higher than their utility. This is the more likely to occur the greater the reduction in price and the more elastic the demand curves. It would appear, therefore, that monopoly with advertisement is likely to be more harmful to economic welfare than monopoly without advertisement, unless a considerable reduction in cost accompanies the increased output of the advertised commodity. A reduction even greater than this would be necessary before monopoly with advertisement would be more conducive to economic welfare than competition without advertisement. For the consumer only gains by monopoly with advertisement if the price fixed is less than the price appropriate to free competition, and then only if the loss on the units produced at a cost greater than their utility is less than the reduction of price on the marginal units together with the consumer's surplus on such additional units as are sold at a price less than their utility. Such a reduction seems very unlikely to occur.

These conclusions assume that the monopolist always adjusts his output in such a way as to obtain the maximum monopoly revenue which is theoretically possible. But in practice, of course, the monopolist often accepts less than this; and the advertising monopolist in particular will hesitate to fix his prices at an exceedingly high level, since the very existence of a reputation monopoly is dependent on opinion. This limitation lessens the probability that monopoly with advertisement will be more harmful than monopoly without advertisement. But it still remains likely that monopoly with advertisement will be less conducive to economic welfare than competition without advertisement. And this last point is of greater practical importance, since the choice between the two forms of monopoly is less frequent than the choice between competition and reputation-monopoly. Indeed the latter problem is one which confronts us daily; for all

advertisement unless the downward slope of the supply curve (measured by the tangent of the angle) is greater than half the downward slope of the demand curve.

advertisement tends to check competition in the ordinary sense and to establish reputation-monopolies. But when an advertiser has secured a reputation-monopoly it does not necessarily follow that he can oust all competitors from the market. This does sometimes happen, and the concentration of output in the hands of a single producer may come about as the result of successful advertisement. It is more usual, however, to find the market for one commodity split up between two or more reputation-monopolists. Since advertisement can increase the total demand for a commodity, the amount sold by each is not limited by the extent of his rivals' sales. Nevertheless the existence of rivals tends to a cumulative increase of advertisement expenditure on the part of each monopolist; and the probability that the consumer will gain from the economies accompanying increased output is thereby reduced. In this way advertisement tends to substitute a form of competition which is harmful to the consumer for one which is beneficial to him.

In conclusion, it is necessary to discuss briefly whether reputation itself confers any benefit on the consumer, whether in fact he is any better off with a commodity for which a reputation has been created than with a commodity of equal quality without reputation. The advocates of advertisement put forward two arguments to show that he is. Firstly, they claim that, when the reputation of a brand has been established, the consumer has the assurance that in asking for that particular brand he will always obtain a uniform and standard product, no matter from what retailer he makes his purchase. This is true and is certainly of some advantage to the consumer: the second and more important argument seems to me more doubtful. Advertisers maintain that reputation is a guarantee of quality. For they say that it is not worth a manufacturer's while to stake his name and spend his money on advertising an article of poor quality. There are three rejoinders to this argument. Firstly, reputations have in fact been created for very inferior goods; and, though such reputations have usually been short-lived, this has not prevented the manufacturers from reaping a considerable profit before the commodities have been found wanting by consumers. Secondly, the argument is based on the assumption that in the long run the consumer is a competent judge of quality. But, in the case of great numbers of goods, his powers of discrimination are very limited, and he can only detect gross differences in quality. So that, though it is probably true that he will not long continue to buy a positively worthless commodity (except

in the case of patent medicines), there is little reason to believe that he will find out if some widely advertised commodity is below the market standard or is made of inferior ingredients. Consequently it appears that reputation offers a very slight insurance against the risk of getting a bad article. The third rejoinder is this. Whereas in buying branded goods with a reputation the consumer gets (for what it is worth) the manufacturer's insurance, if he buys unbranded goods from a reliable retailer he gets a similar insurance. For, since good retailers buy with discrimination as to price and quality, and hold themselves responsible for the goods which they sell, their bulk goods offer to the consumer about as good a guarantee of quality as does the reputation of the branded article.

For these reasons, I think that reputation does not offer to consumers advantages commensurate with the subjective valuations put upon it, nor advantages sufficient to outweigh the harmful effects of advertisement which have been discussed above.

DOROTHEA BRAITHWAITE

THE INFLUENCE OF INHERITANCE ON THE DISTRIBUTION OF WEALTH[1]

Some New Evidence

This paper is intended to deal with one section of the broad problem reviewed by Sir Josiah Stamp in his presidential address to the Economic Section of the British Association (1926 meeting), on Inheritance as an Economic Factor.[2] Sir Josiah Stamp reviewed a wide range of questions centring round the influence of inheritance both on production and on distribution. I have confined myself purely to its effects on distribution, and in particular to its effects on the distribution of property. I have also deliberately restricted the paper to an attempt to ascertain facts rather than to put forward any new theory or to elaborate any old theory.

A direct and simple analysis of the causes which combine to produce an unequal distribution of incomes can be found in the writings of Professor Cannan and those who have followed him.[3] That analysis shows clearly, I think, that the fact of unequal inheritances is *one* of the chief causes of unequal distribution. But it does not determine the relative importance of inheritance as compared with other causes, such as differences in ability, industry and personal economy, or the operations of chance in a world of unstable prices. It is not certain what comparative emphasis should be laid on each of these factors. Yet it matters considerably where the emphasis is laid, both in connection with social opinion and with social policy.

It is obvious indeed that the institution of inheritance cannot itself be an original or primary cause of unequal distribution; it can only perpetuate and may perhaps, under certain circumstances, intensify inequalities of wealth arising originally from other causes. But though, in this sense, inheritance is a secondary factor, that is not, of course, to prove that it is of secondary importance. Its relative importance as a factor in distribution

[1] Part of the following paper, together with an additional section not reprinted here, formed the substance of an address to the Economics Section of the British Association in September 1927. Subsequent to the meeting, I made certain alterations and additions, incorporating more recent figures.

[2] Reprinted in Economic Journal, September 1926.

[3] I am especially indebted to Dr. Hugh Dalton's *Inequality of Incomes*.

is still an open question, and there is no clear agreement of opinions as to the answer.

It is evident that the point cannot be decided simply by theoretical reasoning from general observations and generally accepted premises. Sir Josiah Stamp has pointed out the need for something in the nature of a *quantitative* analysis of the facts, so far as it is possible to ascertain them. He outlined a list of questions to which such an analysis should attempt to provide an answer. I have only tried to answer two or three out of his long list, which had a much wider scope than this paper.

It is important to realise at the outset that, as a means of transferring wealth in a family from one generation to another, and of acquiring property gratuitously, inheritance is only the leading species of a genus. For example, if inheritance were abolished to-morrow, the children of well-to-do parents would still have superior economic advantages, in so far as they were brought up in a healthier environment, better educated and better connected, than the children of the poorer classes. But the importance of such factors cannot be assessed by statistical methods. In the second place, gifts between the living are the great alternative to the transmission of property at death; and there is no means at present of ascertaining exactly how much passes in this way. Lastly, marriage with heiresses is a well-worn method of re-establishing the fortunes of a family. But the effect of marriage customs on distribution is also an unexplored subject.

A full discussion of the influence of inherited wealth on distribution must, of course, take into account the different laws and customs of inheritance prevailing in different countries and at different periods, as also the economic conditions in which those laws and customs operated. But here I have confined myself chiefly to our own country and the present time.

In order to determine the extent of the influence of inheritance on the distribution of property, there are two important questions of fact, which require an answer.

(1) What proportion of the aggregate property is derived from inheritance and gift?

(2) How close is the relation between what a man accumulates by his own activities and what he has acquired by inheritance and gift? In other words, how far does inherited wealth influence the extent of a man's saving and enterprise?

It may be possible to give a very rough answer to the *first* question, by a careful use of such statistics as are available relating to the aggregate capital of the nation at different times and

the probable extent of the total savings. But I have not attempted it here.[1] I have concentrated rather on the second question, interpreted in rather broader and more general terms: To what extent do individuals shift up or down in the scale of distribution away from the niche allotted to them by the relative wealth or poverty of their parents?

Put the question to any miscellaneous gathering of well-to-do people and you are likely to get as many different opinions as there are different personal experiences. Of published information on the subject there is little that is of value. The biographies of millionaires deal generally with lives that are by no means typical of those of the richer classes as a whole. It is usually only the lives of the exceptional people that appeal to the author and the publisher. It would obviously be unwise to base on the lives of Carnegie or Lord Leverhulme generalisations about the economic history of members of the upper classes in America and Britain. The obituary notices of more mediocre men in the daily Press are also liable to be misleading, since they usually lack precise information on financial matters. There is indeed a limit to the fertility of private inquisitiveness, and that limit is soon reached when one is dealing with the economic conditions and histories of one's fellows.

Moreover, at present the published records of the Inland Revenue cannot be of much direct assistance; for they are bounded by the limits prescribed by the necessities of taxation; and our fiscal system does not at present attempt to distinguish between property acquired by inheritance and by other methods.

There is, however, one source of information which does not appear to have been tapped hitherto. The Probate Registry at Somerset House contains particulars and copies of practically all the probates and letters of administration granted in England and Wales since the year 1858,[2] and a good many of those granted before that date. It seemed, therefore, possible to take a sample of well-to-do persons who died recently, and to ascertain for comparison the estates left by their parents or other relatives under whose wills they benefited. Such an investigation would, I thought, enable one to see more clearly the extent to which the distribution of property is or is not hereditary in character. A comparison of the probate values of the estates of two genera-

[1] A whole book might be written on the question of definitions, and the influence of price changes on property values, before looking at the statisticians' estimates of Capital and Savings.

[2] There are a certain number missing in the earlier years of the foundation of the Registry.

tions is, of course, only a rough test. For, in the first place, the amount of property which a man leaves at death is not a really satisfactory index to his economic condition during life, and still less to the economic benefits and opportunities which he is able to transmit to his children. I have already referred to the various methods alternative to inheritance by which property (and a superior capacity to acquire property) may be obtained gratuitously. But, even leaving those other factors out of account, we have still to remember that it is often not possible to ascertain the exact share in his father's estate which a son inherits. Even with unlimited expenditure of time and money on a careful examination of wills, it is not possible to find out the precise amount which a man inherits, let alone receives by way of gift or settlement during life, Not only may he benefit under a number of different wills, but, in any given will, the extent of his benefit is usually not stated explicitly as a sum of money. Again, the trust fund is a common feature of many rich men's wills, and the *ultimate* benefit of any one beneficiary depends largely on whether the other beneficiaries predecease him, whether they leave children or not, and so on.

It is only feasible, therefore, to make a rough comparison between the total estates of successors and predecessors, bearing in mind that the figures employed may sometimes be a misleading index to the actual and comparative wealth of the individuals concerned.

By way of a preliminary experiment, I took as a sample all the individuals reported in *The Times* during the twelve months September 1, 1924, to August 31, 1925, as leaving estates exceeding £200,000 in value. There were 116, of whom 15 were Scottish, Irish and foreign residents. The estates of the latter were discarded as well as another two estates belonging to persons who lived in England, but whose parents' estates were known to have been probated in Scotland, Ireland or abroad, and the sample was confined to the remaining 99 English estates which could be investigated in London. Of these 99 estates, only 6 belonged to women.

At first sight it appears as though *The Times* list must be very incomplete. For, according to the Estate Duty Statistics, there were, during the period in question, 135 English estates of over £200,000, and of these about 20 belonged to women.[1] But the

[1] The exact number of women's estates in this class is not given. But in the class over £250,000, women's estates were 11 per cent. of the total number in 1925-6, and 13 per cent. in 1924-5; in the class over £100,000 they were 17 per cent. of the total in 1925-6, and 15 per cent. in 1924-5.

chief reason for the discrepancy becomes plain when it is realised that the values reported in *The Times* and in the Probate Registry are of *unsettled* property [1] only, as a general rule, while the Estate Duty figures now include nearly all settled property.[2] Now settled property forms rather more than a quarter of the total value of estates in the over £200,000 class, and rather more than *one-third* in the case of women's estates. Thus its exclusion from the probate figures—a serious disadvantage in other ways also—cuts out a number of large estates from my sample, and particularly those belonging to women, as well perhaps as some of the landed gentry with entailed property. The sex and the class, which are (in this way) under-represented, have, without doubt, a higher proportion of inherited wealth than the average.

Of the six women's estates in the sample, four belonged to widows, and in the case of the latter I chose for comparison the estates of *either* husband *or* father, choosing the one under whose will the widow had chiefly benefited. In the case of the men's estates, I assumed, as a general rule, that the chief inheritance had come in the direct line of descent from the father. But there are eleven exceptions, some of these being due to the fact that, while the estate of the father could not be found, the son had benefited under the will or intestacy of some other near relative, whose estate was ascertained. In five cases the estates of brothers or uncles were chosen for comparison, in five cases those of wives or fathers-in-law, and in one case that of the grandfather.[3]

In all I was able to complete 80 out of the 99 cases. In spite of a careful search in directories and obituary notices, and in the English Register of Births at Somerset House,[4] I was unable to trace or to identify the parents in nine cases. In some cases the name was too common for identification, in a few cases the son was born too early [5] for registration at Somerset House, and in

[1] Generally speaking, the probate valuations are restricted to property within the free disposition of the deceased (see below) at the time of his death.

[2] After the Finance Act of 1914, settled property ceased to receive favoured treatment. The probate valuations also exclude property situated abroad.

[3] In the majority of cases, where the estates of brothers, husbands or wives were taken instead of those of the fathers, they had passed more than thirty years before the death of the successors.

[4] By courtesy of the Registrar-General, a search of some 40 birth certificates was undertaken by his department.

[5] The General Register of Births started in England in the latter half of 1837. For some years after that date there is, I am informed, a slight deficiency of 10 per cent. or so of births, and perhaps more in some districts. I have found by experience that that deficiency is not confined to the poorer classes. In a few cases, I am indebted to relatives of the deceased for supplying the information required.

other cases he was almost certainly born outside England. In another 14 cases the estate of the father could not be found or identified in the Probate Registry. This register is not complete for years before 1858, and in a few cases the father had died before that date; moreover, for some years after 1858 it is not likely to be entirely complete.[1] In at least one case no estate was left, because the deceased had distributed the whole of his property during his lifetime. In a few other cases the deceased may have been domiciled out of England.

Other details concerning the method and limitations of this investigation must also be mentioned. For, particularly in a very rough statistical inquiry of this nature, it is necessary, in order to criticise or to appreciate the significance of the results, that the "whole genesis of the figures"—in Professor Bowley's phrase—should be made plain.

The Probate Registry has certain serious limitations as a source of information. I have already referred to the exclusion of most settled property from the probate valuations. Before January 1926, settled *realty* is entirely excluded, and *personalty* settled for life only is also excluded throughout from the estate of the one on whom it is settled. Thus, generally speaking (except in a few cases where information has been derived from other sources), both in the case of predecessors and successors, *property, of which they were not competent to dispose at the time of their death, is excluded.* This important limitation must be borne in mind in any critical examination of my figures.

The second great disadvantage of the probate valuations is that before 1898 they do not include *realty*.[2] Now realty forms to-day between *one-quarter* and *one-fifth* of the total value of property left at death, and a generation ago the proportion was certainly greater. It was, therefore, necessary to supplement the probate values of estates left before 1898 by an estimate of the real property of the deceased. The only supplementary source of information that is at all easily available is the Return of Landowners, or "New Domesday Book," which was made by the Local Government Board in the '70's, and set out to give county by county the names and addresses, numbers of acres owned and gross annual value in the case of all landowners of more than one acre. The Return has many deficiencies as a work of reference; and it excludes the Metropolis.[3] Moreover, in accordance with the agricultural

[1] In at least three cases the father had died before 1858.

[2] Leaseholds are classed as personalty.

[3] For the defects and inaccuracies of the Returns, see the official introduction to them.

assessments, it under-states the value of building land in neighbourhoods that are developing. Again, the owners of freehold premises occupying less than one acre would be excluded. As regards the big landowners, later and more accurate information can be obtained from other works of reference.[1]

In the case of 25 predecessors, rough estimates of the value of the real estate left by them were made from these sources. Of course the estimates could only be very rough. For it was not certain at what number of years' purchase the gross annual value given in the returns should be capitalised and, in a number of cases, one was also forced to assume that there was no great change between the '70's and the date of death in the amount of land owned. The valuable review of the subject given in Sir Josiah Stamp's *British Incomes and Property* shows the number of years' purchase at which the chief authorities capitalised the gross annual value of land at different dates; and figures of rentals given some time ago by Mr. R. J. Thompson enabled one to make an approximate allowance for the decline in agricultural land values during the slump of the '80's and '90's.[2] But my estimates of realty could not take into account mortgages and other charges to which the property might be subject.

The method certainly allows large possibilities of error, but it was not too unsatisfactory under the circumstances. Even quite large errors in the estimates of real property left by the 25 persons in question would not make a great difference to the results as a whole, especially as only in eight cases was the realty estimated to exceed £100,000. In the case of 19 predecessors dying before 1898, no landholding could be traced in the official return, and only the personalty valued for probate could be included.

On the whole, there is almost certainly some under-statement of the property left by the predecessors. My estimates of the realty of those dying before 1898 amounted to £1·704 millions in all, as against nearly £8,000,000 for their total property. The proportion formed by the realty is 21 per cent., whereas the Estate Duty figures show a proportion of 24 per cent. for all estates subject to duty in 1904, and the proportion is still higher in the case of the larger estates. Again, as regards the personalty, there is little doubt that the probate valuations were not so strict thirty or forty years ago as they are to-day.

[1] *E.g.* Bateman's *Great Landowners* (1883 edition used).

[2] Applying the index-number of agricultural rentals at different periods to the number of years' purchase at those periods, I took the following number of years' purchase of the 1870–80 gross annual value of lands in rural areas:—1875, 30 y.p.; 1885, 23 y.p.; 1895, 15 y.p. For urban realty I took 15 y.p. throughout.

With regard to the period chosen for the investigation—namely, the generation that ended in 1925—in some respects this is not the most satisfactory for our purpose. For it includes the abnormal war period, when "windfalls" due to rapid changes in prices and abnormal conditions of demand contributed far more to the establishment of new large fortunes than they did in the preceding generation or are likely to do within the lifetime of the present generation in this country. But had an earlier period been chosen, the technical difficulties would have been greater. For a larger proportion of predecessors would have died too early for their estates to be entered in the London Probate Registry, and outside estimates of realty would have been necessary in a larger number of cases. Moreover, a larger proportion of successors would have been born before 1837, the year in which the English Registry of Births was started, so that their parentage could not have been ascertained from birth certificates.

The following is a summary of the results, relating in the first place to the 80 completed cases out of the whole sample of 99.

(1) The total gross value of the unsettled property of the 80 successors amounted to £37·3 millions; the aggregate value of the estates of their predecessors was estimated at about £26·1 millions, or 70 per cent. of the former sum.[1]

The bulk of this £26 millions passed between 1880 and 1900, and it is impossible to say what the equivalent value of those estates would be to-day. £100,000 invested safely in 1890 produced about as large a "real" income as £115,000 in 1924 (if we neglect the effects of a higher income tax), or as about £150,000 when the increase in direct income taxation is taken into account. For, owing to the higher rate of interest accompanying the rise in commodity prices, property values as a whole have not increased to the same extent as the price level. But the effect of the great price changes during the generation in question, in *individual* cases, would depend, of course, on whether the inherited property was kept in gilt-edged investments or in land, or was put into the more speculative investments of industry and commerce.

As regards the relative magnitude of the individual fortunes of the predecessors, it may be useful to remember that probably about the same proportion of the people in 1890 owned estates in excess of £100,000 as were in the over £200,000 class in 1924.

A cursory examination of some 56 wills has enabled me to

[1] The aggregate value of the property of the 99 successors was £44·1 millions. On the extreme assumption that in the 19 unfound cases, the predecessors had left little or nothing, the ratio falls to 60 per cent.

make a very rough estimate of the proportion of the estates of their predecessors which passed to the successors in my sample. I have already pointed out that, in many cases, it is practically impossible to ascertain with certainty the value of a man's inheritance under the terms of a will—let alone to estimate his total inheritances. But though my estimates of individual inheritances are probably often very unreliable, I do not think my estimate of the total or average proportion is likely to be very wide of the mark. In the 56 cases, where some estimate was possible, the average *net* proportion of the predecessors' estates passing to the successors in question appeared to be between 50 per cent. and 55 per cent. This is after making an approximate allowance for death duties, debts and other deductions from the gross value.[1]

Five women are among the successors to whom this average applies; and it so happened that these women were the sole principal legatees under the wills of the predecessors chosen. In the case of the male successors only, the average proportion of their predecessors' estates passing to them was (according to my estimate) between 45 per cent. and 50 per cent.

The proportion varied greatly, of course, in individual cases, from less than a tenth to the whole (less death duties); the median was about one-third of the net value after taxation.

In making the estimates I assumed that in every case property left for life only to a surviving widow passed intact to the final beneficiaries. But I was not able to allow for the effects of the decease of some of the surviving children prior to that of the successor in my sample. Hence, in those cases, for example, where A leaves property to B and his issue, with remainder to C, and B dies without issue before C, I may have considerably underestimated the ultimate inheritance of C under the will of A.

Moreover, I have only taken into account the will (or intestacy) of one particular predecessor in each case, in estimating the share of the successors in my sample. This share, therefore, does not measure the full extent of the inheritances of the latter, since in most cases they will have benefited under the will of more than one relative.

Lastly, I must again call attention to the fact that gifts *inter*

[1] In the case of the large majority of predecessors, dying before 1914 say, death duties were, of course, a comparatively small deduction. Where no exact information was available as to the *net* value of the estate, after deduction of debts, etc., I deducted about $\frac{1}{12}$th from the gross value. The proportion allowed as deductions from the gross value of estates liable to estate duty was between 9 per cent. and 10 per cent. during the years 1904–14; and more recent figures show that the proportion is less than the average for the large estates.

vivos, such as marriage settlements and the like, cannot be allowed for in an inquiry of this nature. Yet their omission from the figures must stultify any attempt, by an examination of probates, to ascertain the total amount of gratuitous property received by any particular persons. It is not only since the increase in death duties that wealthy men have ceased to wait till their death before providing for their children. The fact that they have made earlier provision is frequently referred to in their wills, and in at least one case the whole of the property had been disposed of before death.

Thus the most that can be said, in the case of my sample, is that the total value of the inheritances alone received by the 80 successors, whose predecessors' probates were found, was probably well in excess of £13 millions.

It is interesting to notice that an investigation of some 52 cases showed the average number of children surviving their parents as 2·25 sons and 2·4 daughters.[1] In half of these cases the father left five and more surviving children. (I did not, within the compass of my small sample, find any evidence to show that "self-made" men spring from families larger than the average.)

I found that, in many cases, the richer predecessors bequeathed the lion's share of their property to one particular son —usually, but not always, the eldest. This was not only due to the custom of primogeniture among the landed aristocracy. For the desire to leave a large property intact in the hands of a single descendant caused a number of wealthy testators, who did not strictly belong to the landed classes, to reject the principle of the *légitime*. We find, for example, a chemical manufacturer with close on a million pounds to distribute among five sons and four daughters, bequeathing £150,000 between eight of his children and leaving the whole residue to the remaining son. A shipowner with £1,500,000, leaving one son and six daughters, having made liberal bequests to his widow and to charities, bequeaths nearly a third of the residue to his son. A brewer with over £400,000 to share between four sons and four daughters leaves over three-quarters of the *net* disposable estate to his eldest son. It is fair

[1] 4·66 was the average number of surviving children in the case of 52 fertile parents. Compare the Registrar-General's figures relating to the number of children surviving in 1911 per fertile and infertile couples married before 1851. The number was 418 (of both sexes) per 100 couples in Social Class I (see T. H. Stevenson, Art. in *Statistical Journal*, May 1920, discussing the Census 1911 returns of occupational fertility).

to say, however, that in this last case, at least, the other children had already been well provided for by settlements during life. Here again, therefore, the absence of knowledge as to gifts *inter vivos* may lead one to wrong conclusions as to the extent of the contrast between the effects of freedom of disposition and the continental laws of inheritance.

But there is little doubt that, among the very wealthy, equal division of the spoils among the family, irrespective of place and sex, is not the general rule. It appeared to be usual, among the wealthier predecessors in my sample, for the sons to receive a larger share than the daughters.[1] In the case of the smaller estates, equal division is much more common.

(2) The following is a classification of the 80 predecessors whose estates were found in the Probate Registry, according to the value of their estates. It will be remembered that, where estimates of realty are included in the valuations, they may be wide of the mark; that the exclusion in most cases of settled property distorts the picture to some extent, and that the figures refer to gross values, before the deduction of encumbrances and debts.

7	predecessors	with	estates	over	£1 million.
10	,,	,,	,,	between	£500,000 and £1 million.
11	,,	,,	,,	,,	£250,000 and £500,000
18	,,	,,	,,	,,	£100,000 and £250,000
7	,,	,,	,,	,,	£50,000 and £100,000
6	,,	,,	,,	,,	£25,000 and £50,000
3	,,	,,	,,	,,	£10,000 and £25,000
6[2]	,,	,,	,,	,,	£5,000 and £10,000
12	,,	,,	,,	,,	Under £5,000
Total 80					

Thus, 46 out of the 80, or nearly three-fifths, left estates of over £100,000 (the predecessors of the six women among the successors are all in this class); 53, or two in three, left over £50,000; 62, or over three-quarters, left over £10,000.

[1] There is no space to discuss here the possible superior advantages derived by the son who inherits his father's business, and the distinction (not shown by probate statistics) between the inheritance of wealth *plus* business opportunity, and that of passive property only.

[2] One of the estates put into the £5,000–£10,000 class may quite possibly belong to a higher class. In this case the valuation on the letters of administration is that of certain trust property only, the administration being limited to that portion. The rest was disposed of by a will which was never proved. The testator was known also to have certain real estate, of which the value was not ascertainable.

There were eight millionaires among the successors in my sample; only in *one* case had the predecessor left less than £50,000,[1] and in six cases his estate was over £250,000. There were 22 successors with over half a million pounds, and in 18 cases the predecessors' estates were discovered. Twelve of the latter were worth over a quarter of a million pounds, while five only were less than £50,000.

I have already explained that the values mentioned refer, for the most part, to unsettled property only. Of the 12 successors whose predecessors' estates are put at under £5,000, two at least, it is known, had wealthy connections[2] by marriage; and the same applies in at least two other cases where the parents' estates are in the £5,000 to £25,000 class.

Such are the facts regarding the 80 cases where the predecessors' estates were ascertained. But there remain 19 cases where they were not ascertained. There is little doubt that among the latter the proportion of "self-made" men is higher. We know something about the successors and their fathers in nine cases, and it is probable that five of the former had started from small beginnings, that one had married an heiress, and that three must have had considerable inheritances. But the remaining 10 cases are entirely doubtful; one only knows that a number of the parents were probably of foreign extraction.

The sample is undoubtedly biassed to a certain extent by the exclusion of these 19 cases, in the direction of showing too high a proportion of wealthy predecessors. On the other hand, as I mentioned previously, a bias in the opposite direction is given by the exclusion of settled property not in the disposition of the deceased. One result of this exclusion was, as we saw, to provide the sample with too small a proportion of women and others who enjoyed large incomes from settlements.[3] Thus the two biasses

[1] This one case is a most remarkable one. A wool merchant left over £1·5 millions. His father was apparently a weaver—smallholder. His estate was not found in the Probate Registry. But the will of the mother was found—under £40 personalty. The mother was apparently illiterate, as her will was signed by her mark. The son's history is shrouded in obscurity, but must contain features of considerable interest.

[2] One was connected with an aristocratic family and changed his name "for family reasons." The brother-in-law of another left over £100,000; in this case the father's estate (d. 1854) could not be found, and his wife's estate, taken for comparison, was £957 personalty, but there was probably a considerable settlement as well. In a third case the estate of the father—a shipowner—was probably in excess of £5,000, but could not be found. The grandfather's estate (£2,000) was taken instead.

[3] In the richest hundred decedents there must have been about 14 women, instead of the 6 coming into my sample.

may to some extent counterbalance one another, in their net effect upon the proportions of wealthy and poor parents appearing in my figures.

However that may be, we know at any rate that, as regards the whole sample of 98, the proportion of predecessors, who left—

over £100,000	was somewhere between				46% and 55%
,, £50,000	,,	,,	,,		55% and 65%
,, £10,000	,,	,,	,,		65% and 75%

And, as regards the actual inheritances of the successors, we may say, with practical certainty, that *at least* 35 per cent. received more than £100,000 *net*, at least 45 per cent. more than £50,000, and at least 60 per cent. more than £10,000. This is not counting property received by way of gift, marriage or other settlements, and inheritances from more than one relative.

It is tolerably certain that a similar investigation dealing with the generation *before* the war would have revealed a still smaller proportion of rich men risen from the ranks. And Sir Josiah Stamp has expressed the opinion that 110 years ago the effect of inheritance on distribution was " far greater " than to-day.[1]

Even within the sample investigated, confined as it was to a very small class of very large estates, it was found that, on the whole, the largest fortunes belonged to those with the richest parents. The successors in the sample may be divided into two classes, those with over £300,000, and those with between £200,000 and £300,000. The average estate of 38 predecessors of those in the first class was £433,000; in the case of those in the second class the average of 42 predecessors' estates was £225,000. On the extreme assumption that the undiscovered estates were all negligible, the averages are £350,000 in the first case and £182,000 in the second.[2]

In some 80 cases it is possible to classify roughly the chief occupations and social status of the fathers of the men in our sample. The following is a summary :—

[1] " Inheritance as an Economic Factor," ECONOMIC JOURNAL, September 1926, p. 356.

[2] Of course these averages conceal a fairly wide dispersion in each case, but the median estate is also considerably larger in the first than in the second class (£196,000 as against £115,000, or, counting undiscovered cases as all below the median, £100,000 as against £60,000).

The ratio of predecessors' to successors' estates seems on the whole to be *distinctly lower for those at the top of the scale.* The ratio is 64 per cent. in the first class (over £300,000) and 97 per cent. in the second class (or, counting undiscovered estates as nil, 52 per cent. in the first class and 77 per cent. in the second).

I.	Peerage, Baronetage and Landed Families	11
II.	Financiers, Large-scale Manufacturers and Merchants (including 4 Shipping, 4 Brewers, 8 Textiles of all kinds, 2 Banking, 2 Newspapers)	33
IIa.	Unclassified Gentlemen of Means	12
III.	Professions (including 4 Clergy and 2 Doctors)	6
IV.	Smaller-scale Manufacturers and Merchants and Shopkeepers (including 4 grocers ,2 drapers, 1 ironmonger, 1 hairdresser, and 3 small-scale manufacturers)	13
V.	Farmers	2
VI.	Clerks and Minor Officials	4
VII.	Artisan and Working Class	3
	Total	84

This occupational classification is bound to be arbitrary in some respects, and is not always a clear guide to social status. But one may say that about 62, or three-quarters of the 84 fathers, belonged to the aristocracy and upper middle class, that some 15 (rather less than a fifth) were what may be described as small-scale capitalists, and that only 3 were in the "working class," in the narrow sense of the term. But it must be added that at least another three fathers had themselves risen from the ranks in their own generation.

Analysis of the occupations of the successors of the poorer parents reveals little that merits special attention, except that, with two possible exceptions,[1] merchandise and manufacture rather than the professions were the sources of their fortunes. But the figures do not enable us to point to any particular branches of trade and manufacture as the most fruitful hunting-ground for would-be millionaires; for the self-made men in our sample represent a wide variety of trades.[2]

It would no doubt be rash to attempt to draw any very definite or sweeping conclusions from an investigation confined to such a small sample, and from statistical results subject to so many deficiencies. But the evidence, so far as it goes, supports the

[1] One described as a solicitor; the other was described as an "accountant" on son's birth certificate. His son was a shipowner, his father a wire-rope manufacturer.

[2] Generally speaking, it is obvious that the more speculative types of business are most favourable to the making both of millionaires and bankrupts. In two cases the invention of new processes seems to have brought the nucleus of a large fortune. Examples of the speculative type of business are colliery pit sinking, newspapers and publishing, stockbroking, pawnbroking. Analysis of the localities from which the "self-made" men came shows a high proportion in the north of England.

opinion that, in the great majority of cases, the large fortunes of one generation belong to the children of those who possessed the large fortunes of the previous generation. Even after the windfalls of the war inflation period, the rich men who have sprung from parents with insignificant resources are certainly a minority of their class. The quantitative importance of that minority is open to question; but the attention which it attracts seems to be due to the fact that those who compose it are exceptional phenomena rather than numerous. It is obviously difficult, and it would appear to be rare, for a poor man to acquire much property by enterprise and saving within the limited period of his own lifetime. And such evidence as there is hardly supports Mr. Keynes, when he says of pre-war Europe, that " for any man of capacity or character, at all exceeding the average," escape was possible from the ranks of the proletariat into the middle and upper classes.[1]

It is certain, indeed, that, in the course of a few generations, the institution of inheritance has frequently enabled a reasonably thrifty and industrious family to turn a small original capital into a large fortune. But within the space of one generation the shifting from class to class is normally not great. Our sample investigation did not go back more than one generation. Had it done so, we should probably have found that the proportion of *grandfathers* with relatively small estates was rather larger than that of the fathers, that of great-grandfathers still larger, and so on. Go back a hundred years or so, and there is little doubt that a considerable proportion of the ancestors of rich men living to-day would be found to have been comparatively poor. But, since poor men are far more numerous than rich, it is equally demonstrable and certain that, in the first place, only a tiny percentage of poor men living to-day would be found to have had well-to-do ancestors, and, secondly, that the descendants of the large majority of poor men remain poor throughout the generations.

The economic history of representative middle-class families would be an interesting and profitable study; and the genealogist may perhaps be of considerable use to the economic historian. In the case of my own family—where the genealogy of the more obscure and less fortunate branches has been investigated, and particulars of some 250 wills and letters of administration granted to members of the family have been recorded—I have been able to trace the fortunes of the different branches of the descendants

[1] *Economic Consequences of the Peace*, p. 9.

of one ancestor through *ten* generations.[1] This is one of many families which became prominent about the time of the Industrial Revolution, and it is fairly certain that the part played in its history by the luck of inheritance and marriage is not exceptional in its importance. The following brief review of its social and economic history may, therefore, have significant features of general interest.

At the opening of the seventeenth century the younger son of a bankrupt freeholder married the heiress of a small landowner in the district now known as the Five Towns. There were three sons of the marriage, whose descendants are living at the present day. The fortunes of the descendants of these three sons have been radically different. The eldest of the three sons, and his descendants in the third and fourth generations, inherited the bulk of the estates of his mother's family, about 240 acres in all, including a small pottery. The descendants of the youngest son (No. 3 branch) during the next three generations also acquired a considerable amount of property by marriage and inheritance. Indeed, in the third generation this was the most important and the most able branch of the family; it contained at least three prosperous potters and good business men who augmented their patrimony by marrying well and by buying up real estate in the neighbourhood. One was a coal- and land-owner on a considerable scale. But, in the next generation, No. 3 branch fades into obscurity owing to a series of unlucky accidents. All the sons of the two wealthiest members died unmarried; the heiress of one married into No. 1 branch; and the bulk of the property of the others passed outside the family to relatives by marriage. Another member lost all his money in an unsuccessful pottery venture; while the eldest member of the branch contracted an unfortunate alliance. The descendants of the second of the three sons (No. 2 branch) were less fortunate in the way of marriage and inheritance, and possessed originally perhaps less ability than the other two branches. One grandson migrated in the early eighteenth century to the coast of Cumberland, where his numerous descendants became working potters, sailors and coal-miners.

It is in the last quarter of the eighteenth century, at the beginning of the Industrial Revolution, that the division of the present-day descendants of the yeoman ancestor of 1600 into "capitalists" and "proletarians" may be foreseen. At that time No. 1 branch had inherited a small estate worth about £4,000 or £5,000 and a growing pottery business; while, of

[1] Col. J. C. Wedgwood, *History of the Wedgwood Family*, and *Wedgwood Pedigrees*.

the two younger branches, one was shortly to be deprived of the inheritances it expected from its wealthiest members, and the other was already fast joining the ranks of the proletariat.

During the opening stages of the Industrial Revolution the fortunes of one shoot of No. 1 branch were increased substantially by a younger son of exceptional ability. Coming after four generations of yeomen potters, the latter revolutionised what had once been a small-scale rural industry, and succeeded in amassing the huge fortune of close on a quarter of a million. In this achievement he was perhaps assisted to some extent by marriage. It is chiefly to his industry and ability that the most well-to-do section of the family still owes its prosperity. Those of his descendants, who have children living at the present day, have in nearly every case, during four generations, left estates ranging from £20,000 to £100,000. With one possible exception, none of them have dissipated their patrimony, but none have greatly increased it.

In another section of the elder branch of the family, the descendants of a cranky inventor, who himself appeared to have squandered a moderate inheritance, benefited considerably from one of his inventions.

In the final result, of the 74 known living descendants of the elder son of the common ancestor, nine generations back, three-quarters are in the middle and upper middle classes, having participated in inherited estates of over £1,000 from the last generation; and at least two in five of their predecessors have left estates of not less than £20,000 or so.

But of the 200 or more descendants of the second and third sons who are living in this country, certainly over 90 per cent. are numbered among the lower middle class and the proletariat. A further 50 are in the colonies and the United States. Only one member of these two branches of the family seems to have left an estate in excess of £500 personalty.

The fact that the descendants in Nos. 2 and 3 branches were on the whole rather more numerous than those in No. 1 branch may possibly be a contributory cause of the greater poverty of the former. But the more certain and obvious deduction is that the fortunes of the different branches were largely predetermined by the economic position of the different members of the family at least *five* generations back.

Much more research is obviously necessary before the part played by inheritance in the distribution of wealth can be deter-

mined satisfactorily and stated with conviction.[1] Hence the conclusions I have drawn are necessarily provisional and indefinite. Re-stated briefly in broad terms they are as follows:—that, in this country at any rate, the larger fortunes are left, in the great majority of cases, by those who received the larger inheritances; that rich persons, who have not received any considerable portion of their property by way of inheritance, gift or marriage, are a minority of their class; and that unequal amounts acquired by industry and saving are closely related to unequal inheritances.

It may be that the hereditary character of inequality is rather less marked in newer countries such as America and the Dominions; and it is perhaps significant that the Australian figures and even the American figures show a somewhat more equal distribution of incomes and property than in our own country.[2] But, however that may be, one must remember that the colonists of new countries have not generally started with a clean slate in the matter of distribution. Those who entered the New Worlds were not required to dispense with property inherited in the Old World.

In the matter of inheritance, the contrast to-day is probably greater between England and Central Europe, where the wild fluctuations of prices have increased the importance of Chance as a factor in distribution, and a certain amount of deliberate disinheritance has resulted from political changes. But I do not agree with the suggestion that the depreciation of money has been historically an effective antidote to the influence of inherited wealth, for the inheritors of large fortunes are not necessarily unlucky or unwise in their investments.[3] It is, I think, true of the modern world generally that there is in our society an hereditary inequality of economic status which has survived the dissolution of the cruder forms of feudalism.

J. WEDGWOOD

[1] One awaits with interest the results of a questionnaire which is being circulated by a Sub-Committee of the Economics Section of the B.A. I am also making a further search in the Probate Registry, with a sample of some 150 persons leaving estates of over £10,000 net.

[2] I refer to the following estimates:—For U.S.A., National Bureau of Economic Research: "Income in U.S.A., 1909–19." (Incomes only.)

For Australia (Incomes and Capital distribution): G. H. Knibbs, *Private Wealth of Australia* (from official Census, 1915).

For Britain: Pre-war estimate, A. L. Bowley, *Distribution of the National Income*, 1880–1913.

Post-war official estimate: 64th Report of Board of Inland Revenue.

For England (Capital), various estimates based on Estate Duty statistics.

Of course, all these estimates are not strictly comparable in every detail, but the rough proportions may be compared.

[3] Where their inheritances have consisted of land, they have not generally suffered from the depreciation of money. Only where the inherited property has been settled in the form of fixed interest and gilt-edged securities has inflation necessarily reduced the value of inheritances as distinct from fresh savings.

AGRICULTURE AND THE PRICE LEVEL

RECENT discussions on agriculture have been characterised by considerable emphasis upon the importance of monetary factors as an explanation of the agricultural depression which has been experienced during the past few years. Since expenses of production are incurred ahead of receipts the entrepreneur, whether in industry or in agriculture, may have to deal with two sets of price levels. If the price level at which his expenses are incurred is lower than that at which he sells his finished goods he obtains a conjuncture surplus in addition to his " normal " profits; if, on the other hand, the price level has fallen by the time he sells his goods his " normal " profits are reduced. On the ground that the " time lag " in agricultural production is abnormally long, it has been claimed that the effect of such differential price levels is of special importance in agriculture.

Assuming a fall or rise in the general price level, the effect upon fixed charges, unsubject to frequent revision, becomes of importance. The principal charges of this character, in the case of industry, are rent of buildings, debenture and preference interest. In agriculture the principal item is, of course, rent of land. (The position of owner occupiers and peasant proprietors is referred to subsequently.) An attempt to ascertain exactly the relative burden which these charges involve in the case of industrial and agricultural output presents obvious difficulties. Certain figures are, however, available in the case of agriculture. The value of the net output of agriculture in Great Britain in 1908 was estimated at £150,800,000.[1] In 1907–8 the gross amount of income in Great Britain from the ownership of " Lands, including rent charges under Tithes Commutation Act, Farmhouses, Farm Buildings, etc.," brought under the review of the Inland Revenue Department, was £42,231,000.[2] The net output of agriculture in England and Wales in 1925 is estimated at £225,000,000, while the estimated annual gross rental value of agricultural holdings is about £42,000,000.[3] Assuming for the moment that all land was occupied by tenant farmers, rent, at the

[1] *The Agricultural Output of Great Britain*, Cd. 6277, 1912, p. 25.

[2] *Statistical Abstract of the United Kingdom*, Sixty-eighth Number, Cmd. 2207, 1924, p. 38.

[3] *The Agricultural Output of England and Wales*, Cmd. 2815, 1927.

time of the first Census of Production, thus represented a fixed charge of approximately 28 per cent. of the value of the net output of the agricultural industry—which constitutes the fund available for the payment of rent, rates, taxes, depreciation allowances and similar charges as well as wages and profits—while in 1925 it was about 19 per cent. in England and Wales. Under the English system of land tenure, therefore, the importance of price changes may be considerable on account of the size of the rent charge upon the industry.

It is necessary, however, to take into account not merely the actual lien upon the output of agriculture and industry constituted by recurring fixed charges, but also the relative ability of agriculturists and industrialists to secure revision of these charges should they come to constitute an abnormally heavy burden through the operation of a falling price level. In the case of industry it may be stated that, speaking broadly, the interest upon debentures is fixed and unsubject to revision irrespective of price changes. The same is probably true of the rent of buildings and land used for industrial purposes. With preference share interest, however, the position is somewhat different and revision of interest rates is very far from being unknown. Turning to agricultural rents, the record of the last quarter of the nineteenth century shows that sympathetic consideration for the difficulties of farmers struggling under rent charges which agricultural depression and declining prices had shown to be based upon too high a level was not unknown. It is probable that there is greater scope for the farmer to secure revision of his rent than for the industrialist to modify the fixed charges against his profits.[1]

The English land system of tenant farming is, however, relatively little known outside Great Britain. In Ireland to-day the average farmer is now either the owner or well on the way to become the owner of his holding.[2] In the United States, at the time of the Census of 1920, 66·6 per cent. of all the land in farms was operated by the owner; a further 5·7 per cent. was operated by managers, presumably in the interests of the proprietor. Of the

[1] *E.g.*, the following paragraph appeared in the *Live Stock Journal* for November 18th, 1927: "A reduction of 15 per cent. in the rent for the half year of all tenant farmers on the Duncombe Park Estate was announced by the Earl of Feversham at a tenants' luncheon at Helmsley on Wednesday."

[2] At the 31st March, 1916, the area of land in Ireland sold under the various Land Purchase Acts, 1870–1909, was 9,926,372 acres, while proceedings for sale had been instituted or were pending in the case of a further 3,490,416 acres, making a total of 13,416,788 acres, or almost 70 per cent. of the total area of the country outside urban districts. The amount of purchase money involved was £123,930,915.—The Rt. Hon. W. F. Bailey, *The Irish Land Acts*.

remaining 27·7 per cent. of the farm land of the country which was in the hands of tenant farmers, no less than 16·8 per cent. was occupied by share tenants, while only 7·5 per cent. was returned as being operated by cash tenants, the remaining 3·4 per cent. being farmed by "share-cash" tenants or by tenants whose type of tenure was not specified.[1] In Western and Southern Europe even before the war a very large proportion of the cultivated area was in the hands of peasant proprietors, or where the tenant system prevailed this was generally métayage or some form of share tenancy. The agrarian changes which have occurred in Eastern Europe since the war have extended these systems of landholding.[2] Thus in Rumania the Minister of Agriculture stated in May 1922 that, when the reforms which were being instituted were carried through, "out of a total of thirteen million hectares of arable land possessed by Greater Rumania, twelve million will have definitely passed into the hands of about four million peasants, in separate lots, varying from one to five hectares according to the region and density of population. One million hectares only will remain in the hands of about six thousand owners."[3] In the Habsburg and Romanov secession states there has been a similar movement towards the splitting up of large estates into small peasant landholdings. Even in Great Britain a considerable proportion of the agricultural area is to-day in the ownership of the occupier. In England and Wales in 1924 approximately 25 per cent. of the area under crops and grass was owned by occupiers.[4] In Scotland, in 1926, 1,094,706 acres under crops and grass were returned as owned by the occupier, or 23·3 per cent. of the total cultivated area of the country.[5]

The importance of changes in the value of the monetary medium in the case of the owner occupier may be greater or less than in the case of the tenant farmer. The unfortunate position of many English small holders who, having purchased their

[1] *Fourteenth Census of the United States*, 1920, Vol. V., p. 122. It should be noted, however, that the U.S. Bureau of the Census includes farmers "operating in addition to their own land some land hired from others" in the category of owners. In 1920 48·3 per cent. of all farm land was in the hands of owners owning their entire farm and 18·4 per cent. in the hands of owners who hired additional land. Particulars are not available regarding the proportions of this 18·4 per cent. of the total farm area (*a*) owned by the occupier and (*b*) hired from others.

[2] Cf. H. M. Conacher: "Agrarian Reform in Eastern Europe," *Int. Review Agric. Econs.*, Vol. I., 1923.

[3] Quoted Conacher, *Int. Review Agric. Econs.*, Vol. I., 1923, p. 15. See also "Share Tenancy in Rumania," *idem*.

[4] R. R. Enfield: *Report upon Agricultural Credit*, p. 11.

[5] *Agricultural Statistics for Scotland*, 1926, Pt. I.

holdings with borrowed money just after the war, have been ruined by the fall in prices has attracted considerable attention. It is necessary to distinguish between the farmer who has bought his farm outright with his own capital and the man with a mortgage outstanding on his holding. In the former case an investment has been made in real assets and is independent of price fluctuations. If prices fall the farmer's real income remains the same. It is true that if he had invested in War Loan, sound industrial debentures, mortgages or similar investments representing claims to a fixed sum of money, his real income would have increased. But if prices rose he would have lost in real income, whereas actually his position, in so far as his investment in his farm is concerned, remains the same. The position of the man subject to an annual mortgage charge is badly affected by falling prices, but he enjoys a corresponding gain during a period of rising prices. It is not possible to estimate the extent to which owner occupiers in Great Britain have mortgaged their holdings. In the United States,[1] however, at the Census of 1920, out of a total of 3,925,090 farms operated by their owners, 2,074,325, or 52·9 per cent., were definitely reported as free from mortgage indebtedness; 1,461,306, or 37·2 per cent., were definitely reported as mortgaged, and for the remaining 389,459, or 9·9 per cent. of the farms, the mortgage status was not stated.[2] The total value of the farms (lands and buildings) reporting the amount of mortgage indebtedness in 1920 was returned at $13,775,500,013, and the amount of debt $4,003,767,192, or 29·1 per cent. of the total value. In Ireland the Land Purchase Annuities at present paid by farmers are for the most part based upon land valuations made between 1870 and the outbreak of war, and consequently Irish farmers have benefited through the fall in the real burden of their annuities.

In the case of capital invested by the agriculturist in equipping his farm the position is strictly analogous to similar investment on the part of an industrial concern. After the initial expenditure involved in stocking the farm has been incurred, any further investment may be treated as taking the form of replacement over a series of years. Interest rates and price levels may be ignored except in so far as the purchases have been financed with borrowed money. In this case the position is similar to a mortgage on land, except that the period involved will probably be

[1] *Fourteenth Census of the United States*, Vol. V., p. 480.

[2] According to the Census Report "an investigation of the farms tabulated as 'unknown' for 1920 in a number of typical counties indicated that by far the greater part of these farms were actually free from mortgage," *idem.*, p. 480.

shorter. Normally, however, the farmer invests certain of his resources in the equipment of his farm. The purchasing power of the original money value may change, but the real value remains unaltered except for a depreciation allowance which represents a ratio of the original real value of the equipment irrespective of the price level at which it is calculated.

After fixed charges, such as interest payments and rents, the wages of labour is the item from which entrepreneurs normally experience the greatest differential losses or gains during a period of changing prices. It is necessary to distinguish two forms of agriculture: (*a*) that in which the greater part of the work of the farm is performed by hired labour, and (*b*) that in which family labour is predominant. Obviously changes in wage rates are only of direct importance under the former system. Adopting England and Wales as constituting an example of a system of agriculture practised with the aid of hired labour, the following table shows the changes which have occurred in agricultural wages and prices during the past twelve years:

	Percentage increase in Agricultural Wages compared with 1914.	Percentage increase in Agricultural Prices compared with 1911–13.
1914	—	1
1915	—	27
1916	—	60
1917	39	101
1918	54	132
1919	96	158
1920	140	192
1921	146	119
1922	74	69
1923	56	57
1924	56	61
1925	72	59
1926	75	51

It will be observed that up till 1921 the increase which took place in the wages of labour was much lower than in the case of the prices of agricultural produce. In that year, however, wage rates showed an appreciably higher relative increase than prices, but in the following year, 1922, the margin of difference was considerably narrowed. During 1923 and 1924 the nominal money rates of wages showed a slightly smaller increase than was the case with prices, but the operation of the Agricultural Wages (Regulation) Act of 1924 has had the effect of increasing wages at a time when the downward movement in prices, following the slight improvement recorded in 1924, has continued. Further, there has been a considerable reduction in the hours of agri-

cultural labour in England and Wales since before the war. The increased labour charge on farms due to this cause is not reflected in the percentage figures given above.

Generally speaking rent and labour charges comprise the principal items of expenditure in agricultural production. Writing in the ECONOMIC JOURNAL for December 1925, Mr. C. Dampier Whetham shows that, on an East Anglian light land farm, rent and labour accounted for 61·3 per cent. of total farm costs, while on a West-country dairy farm the percentage of total farm costs represented by these two items was 44·2.[1] On the former farm payments for feeding stuffs, fertilisers and seeds amounted to 19·7 per cent. of the total costs incurred, while on the latter the percentage was 34·9, almost entirely due to heavy purchases of feeding stuffs. In comparison with industry purchases of raw material in agriculture are relatively small. Excluding trades engaged in working up the produce of agriculture and fisheries, the value of the raw material used by the other trades of the country in 1907 was £329,200,000, to which it is necessary to add an allowance of from twenty-eight to forty-three million pounds for carriage and merchandising of the raw and semi-raw materials used whose value is given above c.i.f. at the port of landing or at the place of production. The total value of the output of these trades, at works, was £1,057 to £1,072 millions. Thus the proportion borne by the cost of raw materials to the value of the total output was approximately 34 per cent. The value of the output of agriculture in Great Britain in 1908 was £150,800,000, while the value of the imported and home manufactured animal foods and manures (exclusive of maize and other imported corn for feeding stock) used in 1907 was £28,400,000, including quantities used on non-agricultural holdings. The proportion borne by cost of purchased raw materials to the value of the total agricultural output was thus approximately 19 per cent. The finished product of one industrial firm constitutes the raw material of other firms to a much greater extent than in agriculture, however. The net output of all the firms included in the Census of Production inquiry in 1907 amounted to £712,135,000, while the value of the materials used was £1,028,346,000. There is in agriculture comparatively little sale of the products of one farm for use in production on others. The most important transactions of this character are probably in the case of live-stock. In 1907 the value

[1] On a number of Lady Day Entry Farms in the Eastern Counties the proportion of outgoings represented by labour, rent, rates and insurance appears to have been 49·9 per cent. in 1924–25, 50·9 per cent. in 1925–26, and 50·1 per cent. in 1926–27. Table V of *Report*, No. 8 of the Farm Economics Branch of the Department of Agriculture, University of Cambridge.

of the live stock imported from Ireland for fattening in Great Britain was placed at about £7,000,000. There is also a trade in agricultural seeds, while sales of straw, hay, roots and similar forage crops also take place from one farm to another. It is certain, however, that expenditure on the purchase of raw materials and on goods to be used in further production is very much less in agriculture than in industry.

Under the British system of agriculture, therefore, the farmer is faced with two primary items of expenditure—rent of land and wages of labour. At the time of the first Census of Production the former probably amounted to fully a quarter of the value of the agricultural output of the country. In comparison expenditure on purchases of materials required for use in production—which in the non-extractive industries is of much greater consequence—assumes a secondary importance. But rent and labour charges are precisely those which are least tractable to revision in accordance with changes in the general price level. The importance of price changes upon British agriculture, therefore, arises not merely through the extended "time lag," but also on account of the character of the principal items comprising the expenses of agricultural production. Outside Great Britain, however, the importance of rent is very much less, while in Ireland, and on the Continent of Europe generally, even wages of labour do not enter into the expenses of the farm to any appreciable extent. The unit of agricultural production is still very largely the small holding, frequently owned by the occupier. On many holdings of this character a monetary economy hardly exists. The land is the property of the farmer and is the source of supply of food for his family and his live-stock, and of seed for his next year's crops, while it is cultivated by his own labour and that of his family. His surplus produce is sold off the holding, however, and the price obtained is governed by price movements on the world market. But in fact the circumstances are reminiscent of barter, for the very market town in which the peasant proprietor's produce is sold is the mart for the purchase of the manufactured goods he requires. The exchange character of the transaction is hardly obscured, although money is the medium by which it is effected. At hardly any point, however, in the agricultural economy of the peasant proprietor does money serve as a store of value, and it is to its weakness in this field that cyclical movements of industrial and agricultural prosperity and depression are ascribed.

D. A. E. HARKNESS

THE SIGNIFICANCE AND USE OF DATA IN THE SOCIAL SCIENCES

> "The social sciences, like the natural sciences, proceed upon the one great premise that the intricate flux of events can in some way be explained. What appear to be arbitrary or capricious happenings can be fitted into a scheme which has no room for anything but dependable uniformity and regularity. Such is the first article of the scientist's creed. The second article of that creed is that the one way to come to a knowledge of these hidden uniformities is by means of those patient and methodical inquiries which we call research."

This, the opening paragraph of an address by Professor Young on "Economics as a Field of Research," [1] is so comprehensive and so clearly expressed that one may regret its use as the opening of a brief address on a specific branch of a great question. It might well be the introduction to a general treatise on the social sciences, which is very much needed, possibly along the lines of Claude Bernard's *An Introduction to the Study of Experimental Medicine.* This thought is suggested by Professor Young's treatment of the intricately complex difficulties of research in the social sciences and the similarity of trend of thought expressed by Bernard. The following brief quotations from Bernard indicate this similarity:

> "It is therefore clear to all unprejudiced minds that medicine is turning toward its permanent scientific path. By the very nature of its evolutionary advance it is little by little abandoning the region of systems, to assume a more analytic form, and thus gradually to join in the method of investigation common to the experimental sciences."
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> . . . .
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> "Reasoning is always the same, whether in the sciences that study living beings or in those concerned with inorganic bodies. But each kind of science presents different phenomena and complexities and difficulties of investigation peculiarly

[1] Allyn A. Young, "Economics as a Field of Research," *Quarterly Journal of Economics*, Nov. 1927.

its own. As we shall later see, this makes the principles of experimentation incomparably harder to apply to medicine and the phenomena of living bodies than to physics and the phenomena of inorganic bodies."

. . . .

"Experimentation is undeniably harder in medicine than in any other science; but for that very reason it was never so necessary, and indeed so indispensable."

This work of Bernard's was written two generations ago on an entirely different subject, approached in an entirely different way, but the underlying mental processes and the trend of thought of Bernard and of Young are the same.

In the introduction to a recent translation of Bernard's book,[1] Professor Henderson indicates the simplicity and modesty with which the "great physiologist" almost doubtingly approached his subject, and his avoidance of "*a priori dogmatisms*," and leads up to the statement that

> "Not until after the turn of the century did the movement which Claude Bernard had foreseen make itself felt. To-day it is well established and should be generally recognised. The result has already been a remarkable increase of experimental investigation and of rational theorising in the clinic. For the first time mathematics, physics, chemistry and physical chemistry, as aids to physiology, have passed into the hospitals."

We are led to wonder if seventy years from now some of the seemingly impossible problems of the social sciences may not have yielded to intensive attack and become matters of routine technique. Of one thing I am certain, that if Bernard had included or even visualised sociology as a science he never would have said that "Experimentation is undeniably harder in medicine than in any other science."

Another interesting similarity between the attitude of Bernard and Young is their appreciation of and respect for the work of the past. To attract momentary attention by picking some point or principle on which time and study have thrown additional light, or on which the pendulum of opinion has swung, and saying that "Adam Smith is out of date" or "Mill's work is obsolete," is temptingly easy and only too common.

[1] Claude Bernard, *An Introduction to the Study of Experimental Medicine*. Translated by Henry Copley Greene, with an introduction by Lawrence J. Henderson. (The MacMillan Co., 1927.)

As it is incumbent on me clearly to show the importance and significance of data, before discussing their nature and use, I will further support the argument by reference to the work of Professor Mitchell, who, approaching the subject from an entirely different angle, has treated it with characteristic intensiveness. His views are indicated by the following abstract from his presidential address [1] which I have used in a former paper:

> "The literature which the quantitative workers are due to produce will be characterised not by general treatises, but by numberless papers and monographs. Knowledge will grow by accretion as it grows in the natural sciences, rather than by the excogitation of new systems. Books will pass out of date more rapidly. The history of economic theory will receive less attention. Economists will be valued less on their erudition and more on their creative capacity," and that we must expect from quantitative methods "a recasting of old problems into new forms" with much more likelihood that old explanations will be "disregarded" than that they will be "refuted."

Here we have the same fundamental idea presented with interesting differences. Young in his paper clearly states the need of patient methodical research, but especially emphasises the importance of reasoning and logic in the use of data, while Mitchell, evidently agreeing as to the importance of sound reasoning, emphasises the value of "creative capacity" in the development of concrete knowledge which will be evolved by "numberless papers and monographs" on specific subjects. As both are absolutely essential it is well that both should be strongly stressed.

In the first chapter of Mitchell's latest publication [2] he gives an exhaustive analysis and an historical study of the processes involved in business cycles. This analysis clearly shows the importance of psychological factors in his problem, and conclusively proves the need for the development of quantitatively stated psychological data. The problem of business cycles is one of a comparatively small number of economic problems which have been so intensively studied and so scientifically treated as to place them in a class by themselves. To reach this conclusion

[1] Wesley C. Mitchell, "Quantitative Analysis in Economic Theory," *American Economic Review*, March 1925.

[2] Wesley C. Mitchell, "Business Cycles, the Problem and its Setting," *National Bureau of Economic Research*, 1927.

on this problem is a significant indication of the importance of psychological data quantitatively stated in the consideration of problems generally in the social sciences.

A third paper giving important strength to the argument is the lecture of Sir Josiah Stamp on "The Statistical Verification of Social and Economic Theory." [1] The lecture opens with the following paragraph:

> "Anyone who reflects upon the troubles and problems of the civilised world to-day must realise that questions are constantly put to economic science to which no clear answer, and sometimes no answer at all, is being given. If we are satisfied that no body of knowledge is worthy the name of science unless it has a capacity for development to meet such new needs, we shall be looking round to see upon what lines growth and change in economics must take place. Will the old methods of inquiry and proof suffice, or must we seek new ones, not necessarily 'better,' but more adapted to cope with the fresh problem and to unfold hidden secrets?"

Taken as a whole the lecture is an earnest plea for more, and yet more, scientifically established data for use in the consideration of the problems of the social sciences. Coming from a man with intensively scientific training who has frequently been called upon for advice in the consideration of important problems requiring action, this plea is peculiarly forceful and pertinent.

In the lecture he discusses the economic curriculum and method of work in one of the great universities in a manner which bears pointedly on this argument. This university he indicates is more interested in the consideration of economic problems and the development of reasoning than in research and the production of data. He freely admits it is wise that at some university economics should "be studied in particular juxtaposition to history and philosophy," and the desirability of the development of methods of thought and logical reasoning from economic data. But he calls attention to the use of indefinite data and antiquated statistics in its curriculum and work, and criticises it as unprogressive.

He might well have added that arguing from indefinite data is not logical reasoning. Mill has conclusively shown [2] that a clear statement of a problem, and unequivocal defining of data

[1] Sir Josiah Stamp, "The Statistical Verification of Social and Economic Theory," Sidney Ball Lecture, November 5, 1926.

[2] John Stuart Mill, *A System of Logic*.

used, is a fundamental necessity in reasoning to a logical conclusion, and that indefiniteness in statement of data may be expected to lead to erroneous conclusions. It is, of course, entirely proper, in the training for logical reasoning, to use hypothetical data; for instance, that the moon is made of green cheese; but the careless or indefinite use of data is inexcusable. The use of such data in the consideration of the problems of the social sciences is seriously hampering their development. A large proportion of the literature treating specific problems and of the propaganda for new ideas and theories is so ably presented and so logically reasoned that there is a distinct tendency to be convinced by the soundness of the reasoning without a careful analysis of the data used, and whether or not all factors affecting the problem have been included.

To have work of the nature described by Sir Josiah, or men with the training indicated, turned loose in the world under the ægis of a great university is more than negatively unprogressive, and may well be characterised as positively harmful and thoroughly unscientific.

Much other literature bearing interestingly and strongly on the subject might well be quoted if the limits of a single paper permitted. These three are chosen as convincingly supporting my argument. The fact that they are all from the economic field is interesting, and is probably due to economics being more highly organised and better defined than other branches of the social sciences, with result that economists are apt to write more concretely and succinctly. Also I may add that as I have discussed this general subject very fully with these three men, and as these discussions have had an important part in forming my ideas, I write this paper with confidence that they will be in agreement with its general conclusions, whether or not in accord with the line of argument and citations.

In this argument I have attempted to show conclusively that the social sciences, including therein economics, are in the throes of a great evolutionary trend toward more exact and more scientific methods, and that, as Marshall said, with his prophetic vision,[1] "There is a growing need for a thorough analytic, and therefore realistic, study of economics, of the same order as that which is given to physics and physiology."

Fundamentally the processes in all sciences are the same. They all have the same purpose—to add to the fund of human

[1] Alfred Marshall, *The New Cambridge Curriculum in Economics and Associated Branches of Political Science*. (Macmillan & Co.)

knowledge. Their problems differ, but in each a problem is solved when indisputable logic, based on unassailable facts, brings an unanswerable conclusion. When a problem is so solved it ceases to be a problem and becomes an addition to knowledge, available for use as data in the consideration of other problems. Thus is a science built up, brick upon brick, by the securing of data and its application by logical reasoning. The process of reasoning, the application of indisputable logic to a problem, is the key which unlocks the door. As the process of reasoning is similar in all sciences, its application to social science only requires the development of a generally accepted terminology and a mutually understood system of thought adapted to the consideration and discussion of its problems. As indicated in the opening argument, much enlightening thought has been given this question and more may well be given. It is, however, aside from the purpose of this paper and is referred to merely to indicate the vital importance to the social sciences of clear and generally understood methods of reasoning.

The great difference between social science and other sciences, in fact the great difference between each of the sciences, is the difference in the nature of the phenomena under consideration. These differences in phenomena require the development in each science of methods of investigation, systems of measurement and comparison, experimental apparatus, and a technique peculiar to itself. These methods and technique are the equipment for the production of the data on which reasoning bases conclusions.

It may therefore be stated that the purpose of scientific investigation in social science is the production of data which logical reasoning can apply to and use in the conduct of human affairs.

It is also axiomatically clear that data to be of value for this purpose must be so unequivocally stated and defined that they can be applied, analysed or tested by other minds. This requires the investigator, when presenting or discussing the results of research, to use great care in the description of methods of investigation and to specifically define terms used which have not a generally understood and accepted significance. In fact it means the development in social science of a more or less standardised type of scientific paper which will be generally used in presenting and discussing problems.

Except in certain branches of economics, most of the sociological and economic literature does not clearly state and define its meaning, and therefore is not of value in the pursuit "of those patient and methodical inquiries which we call research."

This does not mean that the literature has no value, and in fact, as most of it was written for another purpose, is not even a criticism of it. To say that an article written for one purpose is not of value for another is not criticism. There is a clear distinction, not always fully appreciated, between such a scientific paper and a paper written by a scientist. For example, there is a constant and pressing demand from the community for information and advice as to the best line of action on some sociological or economic problem or condition on which action must be taken. Naturally a man trained in the specific field is called upon, and it is an important duty and obligation of a scientist to respond to such a call. The report or treatise which results may well be of the highest value and give the best solution of the problem, or state the safest lines of action possible within the limits of existing knowledge and experience. This is a necessary function of the scientist but is not his creative work. It is the process of reasoning from and applying existing information. In so far as it is based on proven data it is scientifically sound, but under existing conditions in the social sciences it must of necessity usually include data not scientifically proven, the value and effect of which must be estimated and judged.

Such a treatise or report fulfils a great function of the social sciences as it gives to the world the application of existing knowledge. It is the key that unlocks the door. But it has no creative value because, if it is entirely based on proven data, it adds nothing to the fund of knowledge, and if it is in whole or in part based on unproven data, it is an opinion, not a finding. It is a treatise by a scientist, but is not of value in the development of knowledge. Such a report may include personal research work properly presented and stated, and if so, is of course to that extent scientific investigation.

Treatises of this nature are of great value in the development of social science as, in their use of unproven data, they tend to indicate and emphasise the problems needing investigation and are a fertile field to which scientists may look in the selection of problems for research. If the writers of such treatises would more generally be careful to indicate the fact when they use data based on opinion, they would increase this value.

We thus have two great functions of social science, the acquisition of knowledge and its application to the affairs of the human race. These two functions are, of course, inter-allied and interdependent. In fact they are often jointly worked upon by the same mind. But there is a clear difference between the purpose

and objective of each which requires different methods of thought and technique. In discussing the methods and technique which is being developed for the acquisition of knowledge by intensive research it seems necessary to emphasise this distinction.

If the need of intensive research and the purpose and use of data has been sufficiently discussed I will take up the question of the nature of the data which can be evolved from the phenomena presented by the social sciences, data being the facts or assumptions, the premises, on which logical reasoning is based.

In discussion, the data used in the consideration of the problems of the social sciences have been divided generally into two classes, qualitative data and quantitative data. The use of the terms qualitative and quantitative in this connection was, I think, first made by Marshall, certainly he was the first to concretely emphasise the importance of the distinction indicated by the terms. He did not give a definition of his concept in their use, nor has anyone since given a clear definition which has been generally accepted. As the terms are used frequently in sociological and economic writing and discussion, with evident difference in the significance and scope given them, it seems wise to consider their use. Certain restrictive definitions have been made; for instance, it is quite common to say " quantitative, that is statistically stated," or " quantitative, that is mathematically ascertained." It is clear to me that Marshall used the terms with a much broader significance, as have many of us since.

The word quantitative contains the element of measurement, by some standard, of the quantity, degree or comparative relation of a factor contained in a phenomenon. But there is nothing inherent in the word which limits its significance to the specific use made of it in analytical chemistry. The Century Dictionary gives the following definitions: " Quantitative—relating or having regard to quantity or measurement." " Qualitative—non-quantitative; relating to the possession of qualities without reference to the quantities involved; stating that some phenomenon occurs, but without measurement." These definitions seem to accord with the general use of the words by sociologists and economists who are interested in " quantitative " development, and the tendency of their critics is to narrow and restrict the definitions.

To apply the distinction made by the Century Dictionary I give the following example. In an economic study of the relation between the interest rates on short-term notes and the price of

long-term bonds it was observed that bond prices uniformly followed the note interest rate, but only after an interval of time. This interval was ascribed to the psychological fact that the bond investor acts more slowly than the note buyer and takes more time for consideration. This fact was noted, and the conclusion that bond prices followed note interest rates.was modified by the statement that there was an interval of delay due to psychological "lag." In this case the psychological lag was used as a datum in the consideration of the problem and was a qualitative datum because it was not measurably or comparatively defined. Later, intensive observations were made as to the period of time and a curve was put into the problem indicating how soon after a change in note interest rates the bond market would move. The minute this curve was put down on paper the psychological lag ceased to be a qualitative datum and became a quantitative datum. The quantitative nature of a curve is not dependent on its correctness or the conclusiveness of the investigation which produced it. All that is necessary to make it quantitative is that it shall be so stated and defined that its relation to the problem can be analysed and tested by some standard and confirmed or corrected. The ascertainment of the lag described is a measurement by intensive observation of the psychological average action of many minds considering two different types of transaction from different standpoints. It is nevertheless susceptible of conclusive determination as indicated by the progress made by the economists. The distinction between qualitative and quantitative data is not a difference in the nature of the data, it is a difference in the method of statement.

I have perhaps given undue prominence to this question, in fact etymological discussion is apt to be an unnecessary consumer of time. It is of minor importance where a word comes from, the essential is to make sure that the terminology used is so generally understood or so clearly defined that misunderstanding is impossible. But in this case the intent is to give definitions of qualitative and quantitative which will accord with their use by Marshall and others who have discussed the quantitative development of the social sciences. However well I may succeed in this purpose I can at least define them as used in this paper.

I will therefore define the terms qualitative and quantitative data, as used in the consideration of phenomena in social science, as follows:

Qualitative data are factors, elements or conditions observed or ascertained to exist in phenomena, the relative value or comparative importance of which have not been measurably stated and defined.

Quantitative data are such factors, elements or conditions which have been subjected to intensive analysis and their relative or comparative force or effect on a phenomenon defined, measured and stated.

It will be noted that under these definitions qualitative data are necessarily the precursors of quantitative data, as the existence of a factor must be observed or ascertained before its force and effect can be measurably considered. Qualitative data can be and are properly used in the consideration of problems, and their treatment with such data is often referred to as the metaphysical method, but more properly may be specifically defined as the *dialectical* method.

A quantitative datum is a qualitative datum which has been defined, stated and measured by some standard. The words "by some standard" are put in to signify that there are standards which can be used for the measurement of the force and effect of a factor ascertained to exist in a phenomenon that are neither mathematical nor experimental. For example, the colour green is found to exist in phenomena of a certain class, and qualitative observation shows that it exists in different examples of this phenomenon in varying shades. An analysis of the different effect on the phenomenon of the varying shades is undertaken, and for this purpose a card is made with ten shades of green, varying from light to dark and lettered from A to J. By the application of this standard it is found that example number one of the phenomenon contains shade D, number two contains shade G, and so on. If all the other factors in the phenomenon are quantitatively measured and the different examples of it compared, the force and effect of green on the phenomenon can be quantitatively and definitely ascertained. In this case there is no use of grammes and centimetres, no element of experimentation, and yet the result is a quantitatively stated datum for the consideration of the problem. A clear understanding of this point is made necessary by the difficulties and complexities met in the creation and use of psychological data.

The quantitative nature of a datum is not dependent on the accuracy and soundness of the measurement, but entirely on the fact that it is so stated and defined that the accuracy of the measurement can be analysed by another mind and confirmed

or corrected. The treatment of a problem with such data has been and may be defined as the *scientific* method.

The line of demarcation between these two methods, the dialectical and the scientific, is not clearly defined, and in usage they are constantly overlapping. But the fundamental difference and the value and difficulties of each can be discussed.

The *dialectical* method is an absolute necessity in the consideration of problems which must be acted upon and which contain factors that have not been quantitatively stated. It is characterised by the fact that the evaluation of its data is largely dependent on opinion, experience or erudition, which opens the door to a very wide range of discussion and speculation. This method should be and will be used as long as there are indefinite or new problems in social science. As each step made, which throws light ahead, seems to open up new vistas and as we can hardly visualise the solution of such a problem as the relation between the human body and the soul, it may be assumed that the dialectical method will continue to be an important factor in the development of social science indefinitely.

The principal difficulties in this method come from its indefiniteness. There is such constant danger of the omission of some factor from a problem or confusion in terminology, and the element of judgment is so important, that only the most highly trained and best minds can hope to be of value in its field. And yet the door is so wide open that it is temptingly easy for the untrained and immature mind to wander in, with result that there is in social science a hopeless mass of negatively good or positively bad literature and a lamentable waste from misdirected effort.

The *scientific* method assumes a clearly stated problem, analysed to make sure that it is a simple problem and not several problems combined. It requires a careful study of factors bearing on the problem and a quantitative statement of each. A problem so stated is in form to have logical reasoning produce a solution. The reasoning must of necessity always remain dependent on the clearness and soundness of the reasoning mind, but if the problem is fully and simply stated it is comparatively easy to follow and check up the logic of the reasoning. The great difficulty in the scientific method is the creation and verification of quantitative data.

Here lies the fundamental difference between the two methods. The soundness of a conclusion reached by the dialectical method largely depends upon the judgment and ability of the mind

presenting the conclusion, and upon the credibility of the data; whereas the scientific method presents its case in form for analysis and review by other minds. The dialectical method contains the elements of a dictum, the scientific method is in essence a challenge.

The principal difficulty in the scientific method is the creation of quantitatively stated data. Many of the phenomena of the social sciences are so little understood and are so complex that it is not surprising we often hear the statement made, without pretence of proof or evidence except personal belief, that it is impossible to quantitatively solve such and such a problem. But it must be remembered that quantitatively stated data are not necessarily correctly stated data, in fact a first statement of an intricate factor may well be incomplete or inexact. The first statement is in effect a challenge to others to accept, refute or amend the finding, and the scientific method consists of a constant persistent analysing of data and the application of each amended or corrected form. The conclusion reached from the best established quantitative data is the best conclusion possible within the limits of existing knowledge.

It is far easier than is generally assumed to quantitatively state an intricate factor, and once stated the process of analysis will immediately begin. Also qualitative data can be used in the scientific method by the mere assumption based on personal opinion of the force or effect of a qualitatively ascertained factor. For example, it may be stated that " it is assumed for the purposes of this inquiry that the differences of racial characteristics of the two nations under discussion will cause a deviation in the findings to the extent indicated by the curve inserted." As a matter of fact this mere assumption is in effect a quantitative statement of the factor as it gives a stated measurement of the effect of racial difference in form for analysis and criticism. It is a start towards the establishment of a technique which may well in time produce conclusive results.

A detailed study of the different types of data and methods of their quantitative statement would be sufficiently extensive to justify a separate inquiry. I will therefore merely say that quantitative data have been developed, in varying degrees, by the statistical method, the case study method, observation and experimentation; and further, that experimentation in many social science phenomena, and the complexities of quantitative statement of psychological factors, are most in need of study.

Conclusion

"The social sciences, like the natural sciences, proceed upon the one great premise that the intricate flux of events can in some way be explained." As "anyone who reflects upon the troubles and problems of the civilised world to-day must realise that questions are constantly put to economic science to which no clear answer, and sometimes no answer at all, is being given," it is the manifest province of social science, not merely to discuss, but to *undertake the solution* of these problems.

The scientific solution of a problem is accomplished by logical reasoning based on data which state the factors contained in the phenomenon under consideration. "Reasoning is always the same, whether in sciences that study living beings or in those concerned with inorganic bodies. But each kind of science presents different phenomena and complexities, and difficulties of investigation peculiarly its own." Therefore social science must have methods of investigation and technique which will develop knowledge of the factors contained in its phenomena.

The soundness of conclusions reached will depend on the accuracy and completeness of the data used in consideration. As "knowledge will grow by accretion as it grows in the natural sciences, rather than by the excogitation of new ideas," the necessary data must be developed "by means of those patient and methodical inquiries which we call research."

JOHN CANDLER COBB

THE RECENT BANKING CRISIS AND INDUSTRIAL CONDITIONS IN JAPAN

THE banking crisis which took place in Japan in the spring of 1927 was partly the aftermath of the great slump of 1920-1. Readjustment was proceeding slowly when the earthquake of 1923 put all back. In consequence of the slump and the earthquake following, banks were left with a number of bad debts on their books which sooner or later had to be dealt with. Moreover, assets appraised at the inflated values of the war boom had not been adequately written down in many cases, and these, too, had to be dealt with.

After the earthquake of 1923 an Imperial Ordinance ruled that drafts payable in the earthquake area which had been discounted by banks prior to September 1, 1923 (the day of the earthquake) should be rediscounted by the Bank of Japan and consequent losses to the bank should be made good by the Government to the amount of 100 million yen. Earthquake bills rediscounted by the Bank of Japan up to March 31, 1924, amounted to Y430,000,000 approximately. Many of these bills were redeemed, but in the spring of 1927 there was still about 207,000,000 yen outstanding. The Government drew up and introduced into the Diet a measure for dealing with these outstanding bills, whose maturity had already been twice extended. The measure consisted of two Bills. According to the first Bill the Government was to issue 5 per cent. public bonds to the extent of 100,000,000 yen, and give these to the Bank of Japan, by way of indemnifying the bank for losses incurred in rediscounting earthquake bills.

The second part of this measure, called the Law for the Disposal of Earthquake Bills, dealt with the balance outstanding. According to this law the Government was to issue 5 per cent. public bonds for 207,000,000 yen (including those to be given to the Bank of Japan) and lend them to the other banks holding earthquake bills for a period of less than ten years. One of the conditions attached was that these other banks should get a written agreement from the drawees of these bills that they should be redeemed within ten years.

These two bills roused considerable criticism and suspicion, as it was believed their effect would be to benefit certain interests.

It was known that the Bank of Taiwan alone held about 90,000,000 yen of these bills, the drawees being the well-known firm, Suzuki.

Though both bills passed the Diet, financial uneasiness was not relieved. Runs on several banks were made. Large private banks approached the Bank of Taiwan for the refund of call loans. The Bank of Japan offered all accommodation possible, but eventually decided not to make further advances to the Bank of Taiwan without guarantees of indemnification from the Government. As the Diet was not sitting, the Government approached the Privy Council for an Imperial Ordinance whereby the Bank of Japan should be indemnified for losses on advances to the Bank of Taiwan to the extent of 200,000,000 yen. The request was refused, whereupon the Cabinet resigned, and on the following day, April 18, the offices of the Bank of Taiwan (except the Head Office and Taiwan branches) closed their doors. This aggravated the financial situation; several banks had already suspended, and runs on several first-class banks of sound standing took place. The new Government proclaimed a three weeks' moratorium from April 22, during which a special session of the Diet was called. Two measures were introduced, one to indemnify the Bank of Japan for losses on advances to the Bank of Taiwan to the extent of 200,000,000 yen, and the other to indemnify the Bank of Japan for losses on advances to other banks to the extent of 500,000,000 yen. These two bills were quickly passed, and on the expiration of the moratorium on May 13 financial calm had been restored.

The serious problem left for the new Government to solve was the readjustment of the finances of some twenty-eight banks (with aggregate deposits of approximately 860,000,000 yen) which closed their doors during the period of the crisis. For the smaller banks the solution is in the writing off of deposits by 40 or 50 per cent. and their absorption in a new bank. This new bank is the Showa Bank, named after the era of the reigning Emperor, the capital of which is 10,000,000 yen, mainly contributed by the first-class banks of Tokyo. This will probably solve the problem of the smaller banks. But it left the problem of the Fifteenth Bank, one of the largest and oldest Tokyo banks, with deposits of 350,000,000 yen, unsolved. It is known as the Peers' Bank, and members of the peerage hold a large amount of its shares and deposits, including a large proportion of unpaid shares. It was at one time the Treasury of the Imperial Household, which, at the time of its suspension, still held large deposits in it. It had made large advances to shipping and shipbuilding concerns on valuations made at the top of the shipping boom. The readjustment

of the bank was rendered difficult by the fact that half its capital (subscribed capital 100,000,000 yen) was unpaid, and the calling up of this amount will involve great distress, if not ruin, to a number of peer shareholders. The continued suspension of this bank had a depressing effect on financial conditions in general. Under its readjustment scheme it will receive a credit of 80 million yen from the Bank of Japan, capital will be cut to one-fifth, and unpaid capital called in.

The panic caused a great diversion of funds from the smaller to the larger banks. It was very difficult at first for these large banks to find outlet for these suddenly accumulated funds, especially under the present depressed industrial conditions. A great amount was invested in bonds, and especially in the purchase of domestic bonds issued abroad, and in foreign bonds. It is estimated that between 20 and 40 million yen left the country in the four months following the panic. In August the Government loaned 120,000,000 yen to prefectures for the purpose of diverting funds from the cities to the rural districts. In September the Ministry of Finance decided to advance 50,000,000 yen at low interest to sericulturists to stabilise the cocoon and raw silk market.

Prior to the panic the yen had reached *2s.* $0\frac{3}{16}$*d.* T.T., the highest point for many years. In the early spring of 1927 there were persistent rumours that the gold embargo would be lifted, and these were partly responsible for the level of the yen at this time. After the panic the yen fell to 1*s.* $10\frac{7}{8}$*d.* T.T., and in spite of an excess of exports, unusual at this time of the year, it has remained at this low level. The export of funds referred to above is partly responsible for this. But it should be remembered that the yen is to some extent influenced by the Chinese silver market. The Indian Currency Bill, involving the demonetisation of silver, had caused in China a sale of silver for yen and thus given some strength to the yen. But the subsequent re-purchase of silver for yen has been a factor in the recent weakening of the yen.

Various banking reforms are in progress. The Government is encouraging amalgamation. At the beginning of 1927 the banks in Japan numbered 1500, and this number was reduced by eighty-four during the first nine months of 1927. By the new banking law an additional number of banking inspectors were appointed. A factor contributing to the seriousness of the late crisis was the payment, on demand, of fixed time deposits. After the crisis the Tokyo bankers came to an agreement that, in future, fixed time deposits should not be paid before maturity.

On the whole the crisis may be explained as a writing off of bad

debts and a writing down of values, work which should have been completed five years ago, but which was further delayed by the great earthquake of 1923. This being done, there is no doubt that the situation will be healthier, for neither the industrial situation nor the condition of national finances give cause for great pessimism. Domestic trade of Japan is far greater in volume than the foreign trade, and the following are figures of freight traffic on railways for the first eight months of 1925–6–7 :

(000's of tons.)

1925.	1926.	1927.
5136	5488	5391

As regards foreign trade, the amount has been approximately stationary, but for the first nine months of 1927 there has been an export surplus instead of the usual import surplus.

	1926.	1927.
Imports .	1,910,665,704	1,492,234,291
Exports .	1,507,475,757	1,702,295,955

Production of staple commodities shows very favourable progress if compared with the average output for the years 1921–5.

Index of Production.[1]

	Cotton Yarn.	Cotton Tissues.	Raw Silk.	Coal.	Copper.	Paper.
1921–25 .	100	100	100	100	100	100
1927 :						
January .	121	132	72	117	102	150
February .	124	132	73	101	87	151
March .	126	139	141	128	111	153
April . .	132	146	140	114	114	161
May . .	117	141	147	117	112	163
June . .	117	139	182	119	105	164
July . .	110	129	213	117	98	163
August .	110	126	210	105	101	171
September .	113	133	184	113	108	166
October .	116	135	180	122	113	169

Political troubles in China and decline of silk demand from the United States have been two factors for concern in the industrial situation. As regards China, exports during the first eleven months of 1927 show considerable decline :

Exports to China.

(First eleven months of year.)

	1927.	1926.
Yen	488,868,000	542,986,000

[1] Index Number prepared by Mitsubishi Goshi Kaisha.

One of the encouraging factors of the silk industry has been the increased demand from Europe :—

Silk Exports to Europe.

	1925.	1926.	1927.
England (Y1000)	319	912	1,263
France (Y1000)	1,532	7,799	17,451
Italy (Y1000)	—	—	42

As regards national finance, expenditure during the last five years has increased a little :—

National Expenditure (Y1000).

1921–22	1,489,855
1922-23	1,429,689
1923–24	1,521,050
1924–25	1,625,024
1925–26	1,580,462
1926–27	1,639,382
1927–28	1,717,000 (approximate estimates

National Debt Outstanding (Y1000).

End of March, 1921	3,234,044
1923	3,808,661
1925	4,329,733
August 31, 1927	5,193,731

Of this National Debt the external debt amounted to approximately 1,500,000,000 yen on March 31, 1926. Against this external debt Japan has made the following loans and export of capital to foreign countries; amounting in all to 1,400,000,000 yen.

Export of Capital to Foreign Countries from Japan.[1]

	(Yen 1000.)
European and American loan bonds owned	70,000
Loans to China	260,000
Loans to Russia	290,000
Invested in cotton-spinning and other industries in China . .	400,000
Invested in South Manchuria Railway Co., and other industries in Manchuria	300,000
Invested in rubber and other industries in the South Seas . .	40,000
Others	50,000

The interest on Chinese loans is in arrears, and that on Russian loans a bad debt, so that the total proceeds from these investments is greatly reduced. In the year 1923 the total interest was not more than 95,000,000 yen.

TREVOR JOHNES

[1] Estimates quoted from the *Japan Year Book*, 1927, p. 453.

REVIEWS

An Economist's Protest. By EDWIN CANNAN. (London: P. S. King & Son. 1927. Pp. xv + 438. 8vo. 16s. net.)

THIS book might briefly be described as a full-length presentation of the intimate feeling and overt utterance during a crucial period of one justly in the front rank, sadly thinned of late, of outstanding economists. As such it calls for attention corresponding to so ample a display of the characteristics of the author. They may be thus outlined. Independent and stimulating, if sometimes stiff and often provocative, thought; wide, precise, recondite knowledge; positive stout belief; quick and keen and definite judgment; terse, accurate and lucid exposition; trenchant logical dialectic; and the free, neat use of telling, though it be also caustic, illustration. These shining qualities, it could be hinted, have their defects, to which we shall draw notice afterwards; but we would preface more detailed comment with an initial summary. In the form taken by Dr. Cannan's "selection from a considerably larger number of letters and articles, published and unpublished," written from 1914 to 1926, "left almost exactly in chronological order" instead of being re-arranged "under subject-headings," and reproduced verbatim, save for the correction of a "few obvious slips of the pen and misprints" and "faults of expression," and for the erasure in some cases of the "names of correspondents" and of "others," so that, "litera scripta manet," we get a speaking picture of the living man. It can appropriately be put beside the companion tribute [1] of a few months back, honouring alike to the Emeritus Professor and to an able group of admiring pupils. May we use the privilege of long friendship to suggest at once that his "bark is worse than his bite"? While he is capable, as he concedes in a piece printed here, of a "good scolding" of a book as if it were an "essay submitted" by a pupil, his sterling native kindness is not only set beyond impeachment by the collected testimony of pious affection which we have mentioned, but is betrayed characteristically in an addendum on these very pages. For he ends his letter with the words: "You must excuse my freedom," for "it isn't every day that I have a book dedicated to me." [2]

[1] *London Essays in Economics in Honour of Edwin Cannan.*

[2] He was linked in the dedication with Mr. J. E. Cohen and Mr. J. A. Hobson.

The incident may be quoted, as this item serves to illustrate a drawback of the general scheme of compilation. The treatment, important intrinsically (and it is freshly and deftly handled), of the reasons " why the institution of property is maintained " cannot be grasped very readily without having before us Dr. Scott Nearing's book, to which his critic refers by cited page; and the paper itself seems admissible by a generous comprehensiveness alone. We can easily imagine, had he so preferred, how Dr. Cannan would have done better concentrating on the topic which, as it is, bulks most largely. Following a straiter path he could, no doubt, have given even more instructive and convincing a disclosure of the subtle, spreading poison of currency-mongering. That happened, it should be noted, as he aptly comments, in more deadly and pronounced degree after the Armistice than during the war itself, at a time, that is, when apology for blindness to the repeated lessons of past history, if ever an excuse was adequate, had become lamer, through relief from stunning and bewildering stress. The ugly reality, stripped of all disguise, is now demonstrated that, like other countries, we, to a less extent, met expenditure, indirectly it might appear, and, it could be plausibly professed (though Dr. Cannan deals scant allowance to the plea), without deliberate conscious intention, in effect through a forced loan, raised at the immediate cost of many and to the eventual prejudice of all, even the Government itself, by the issue of paper that was actually inconvertible. The Professor's triumph in this controversy, to which we shall make further reference, is the greater, as, removing layers of camouflage, he forced into the open skulking manœuvres both of emission and of withdrawal of the Treasury notes, and also because the enveloping mists he was resolutely dissipating had so fogged the atmosphere that Mr. Lloyd George, Prime Minister, typically *insaisissable*, according to the witty label affixed by grim French irony, in amateur insouciance was wont to talk of the status and the value of the " sovereign " when he should properly have distinguished the worth and position of the " paper pound," and " monetary experts," and, among them, co-professors of economics in a topsy-turvy fashion, as Dr. Cannan stigmatises, reasoned that the additions to the paper currency were the required consequence rather than the starting cause of the rise of prices. On this predominant subject the method adopted here entails repetition, though the persuasiveness of the argument may be increased thereby and the demonstration to which we have specially referred gains clarity and completeness.

Dr. Cannan himself denotes two lines of "protest" as converging to desiderated unity. "The one," he says, is directed against "what may be called economic nationalism or nationalist economics" and on the other he rebuts "expedients which ought to be rejected whether the economic ideal aimed at is nationalist or cosmopolitan"; and he declares that these two are "so intertwined that it is undesirable to try to keep them apart." "Even," he adds, "the choice and management of a national currency is inextricably mixed up with international relations." Those who are, like the writer, substantially in accord with him on the chief points of difference in the monetary debate, may yet deem more vulnerable his position as a "mundane" rather than a "national" economist. It seems that this ruthless emphasiser of hard awkward fact is led into what is suspiciously akin to fanciful Utopia, or is complacent self-delusion, when, for instance, he sanguinely forecasts world-economic conceptions and cosmopolitan harmony as compelling substitutes for narrower militarism, regarded apparently by him as the sole instigator of nationalist, or imperialist, fiscal arrangements tainted by the heresies he reprobates and the entire cause of the discords he connects therewith. All cannot keep company with his assurance over this uncertain ground. To his blame, however, of "expedients" other than inconvertible paper which "ought to be rejected" by nationalists and cosmopolitans alike, but which were nevertheless tried vainly or unhappily between 1914 and 1926, most will assent. We may acknowledge the need and force of his scornful chastisement of the facile, popular charge of "profiteering"; and appreciate his opportune explanations of the wholesome influence of rises of special as contrasted with general prices. It is a fit use of an epithet, rather favoured by him, which often carries no more weight than that lent by the approval of the user, to pronounce him "sound" in his early reminder that it was idle, hazardous folly to think or say that the working classes could be spared from feeling, later if not sooner, the burden laid by the destructive spending of the war, and, similarly, then and afterwards, that it was perversely futile to preach, advertise, or make an onset on the voluntary expenditure of the rich, much smaller in the aggregate, in lieu of dealing drastically with the larger total of the less variable consumption of the poorer masses, if supplies perforce curtailed were to go round. It was a pertinent and informing comparison which he drew between the action of the Government in the two matters of sugar-selling and of railway fares, trying to ease onus in the former while purposely adding

pressure in the latter. And yet, he grimly and pithily observed, the second found prompt acquiescence while the first bred disappointed discontent and resenting friction. On these as on other vexations of war time his fine and rare acumen, and his large fund of sage common-sense, were turned with sure celerity; and, as we read, or re-read, not a few of these many letters, articles and reviews, we are impressed by the insight and the foresight shown. It would have been a loss if they had not been preserved in some shape, and they contribute indispensable traits to accurate full portraiture of the living man. And yet we remain obsessed by inconsiderate hankering for a different meal. Perhaps, when an occasion we shall mention at the end of this review arises, Dr. Cannan will still meet our craving for a feast less spread but not less nourishing. In the present *menu* readers of the ECONOMIC JOURNAL can renew acquaintance with not a little that appeared originally on these pages. They will welcome the refreshment, but it may interest them to learn that for 1918 four of the five pieces have that source, and that between a fourth and a third of the whole number of papers and about two-fifths of the total contents of the book were thus first put into print.

Publishers, alas! (and even dignified University Presses) have the habit of preliminary "puffs" of their forthcoming wares. In the case of this book, we are informed that a certain "unity" is given to the "selection" by the "human interest" of "watching a single man struggling against the current of the popular beliefs of the moment." The author himself, in his humorous and candid preface, quizzingly retorts to the "impertinent" inquiry into his service during the war with the title of the book; and as we turn its pages we are reminded of the parallel of "Athanasius contra mundum." The attitude of protestant is congenial, and the host of those with whom he finds himself in conflict is as varied as it is numerous. We remember too that while the impartial verdict of history has allowed that a champion of orthodoxy as able and as resolute as the Alexandrian Father was needed to turn the tide of the Arian heresy, well-nigh successful, the damnatory clauses of the creed bearing his name have repelled, if they have not enraged, many believers since. And we ask whether Dr. Cannan, vindicated for his strenuous resistance to the mirage of currency miracle, is not too prone to doom to "everlasting perdition" every dissenter who will not keep "whole and undefiled" the faith delivered in each clause of his *credo*. The announced design of the book lends itself to this consequence, but the search

for who or what comes scatheless from the strict ordeal is not soon rewarded. The shopkeepers who palmed their stale or spoiling wares on unpatriotic hoarders are, as we understand, an exception. We should have expected ridicule of protectionists, whether professors sitting on an agricultural "tribunal" or men of business planning "safe-guarding," and the like. Unofficial investigators such as Mr. Lloyd George's Land Inquiry Committee are as drastically castigated as Departmental Committees on Prices, and Commissioners instructed by Government to inquire into the causes of industrial unrest. The *faux pas* of State "interference" itself during the war and after is visited with blame which may not have been undeserved; and *pace* Dr. Dalton, should he hug the solace of some collectivists that the transgressing authorities were tarred with the brush of a capitalist regime, the unfounded assertions of Socialist newspapers are not exempted from his master's rebuke. Professors of economics, both old and new, are admonished. We must be sensible of delicacy in the situation when Dr. Cannan was, as we suppose, expected to bless Adam Smith, for, while there were "three great things which he did accomplish," "very little of his scheme of economics has been left standing." Marshall and Professor J. B. Clark, for all their repute, are sentenced as guilty, the first of an "awkward" statement, and the second of "absurdity." Being no respecter of persons, his speech to his adversaries on money is, of course, not minced, but Dr. Cannan also dilutes his praise of writers he commends, such as Professor Cassel, with chastening reminder; and he thinks that Nicholson, honourably mentioned, as is fit, for his prompt detection of the currency danger, went astray, or misled, in his use of the term inflation.

This general censure is neither pointless nor gratuitous, and Dr. Cannan is an acute and candid critic. But we should still lodge the demurrer that, while the affirmation of his own views is obviously immune from any qualm of misgiving, the damning charges brought against opponents, great and small, be the differences slight or more considerable, are excessively provocative. The writer had the perverse diligence to bring together epithets and descriptions contained in the first fifty pages; and their conformity to type is close. "Perfectly futile," "truly amazing," "quite unsound," "preposterous scheme," "hopelessly rotten ideal," "a fool's paradise," "a mare's nest," "mad as a hatter," "meddlesome busybodies," "gross misuse of language," "topsy-turvy view," "contradiction in terms," "general cackle," "a queer world"—such may serve as samples; and after that we

are prepared, and not very shocked, to learn that "nothing else" but bad economics "is to be expected from committees of middle-aged men in view of the recent state of education in elementary economics," while we agree that a "smattering of economic theory" is in sober, if sad, truth a "very dangerous thing." Yet the conclusion is that Dr. Cannan does not "suffer fools gladly," or would at any rate "answer them according to their folly." And also that tolerant or conciliatory approach is alien to his combative temper and a negligible factor in his controversial tactics. It is, if we may say so, "pretty Fanny's way," and we have already applied the proverb that his "bark is worse than his bite." If he is a born he is also a straight fighter; and, though they *seem* unamiable, we must indulge his foibles, if *en revanche* we would enjoy the total as well as the marginal utility of his virtues.

Their high measure was conspicuous in the monetary crisis to which we would again refer as we end this review. The story from its opening phases, through its successive chapters to its culmination and finish, can, as we construct it, be best told by the use of metaphor at the risk of mixture. Dr. Cannan then with keen scent smelt the rat. With relentless pertinacity he pursued the pest in all its turns and twists, as it doubled and doubled again, on its tracks. He penetrated to the inmost, darkest recesses of its hiding-places. He was not led away by any red herring drawn across his path. He felt and declared throughout the need of killing and not scotching. He dragged the verminous nuisance forth into the broad full light of day, and the fighting had been so hot, the capture was so sure and the destruction so complete, that in the end he won complimentary acknowledgment among those who had dissuaded or delayed, or held aloof, or had tried to hinder or divert. As we now look back to an episode beyond recall we must regret that one potent cause at least of our subsequent troubles was not avoided. When we note the inevitable lag and irritations of wage-adjustment, and attempt to gauge on the one hand the onus, or vanity, of making workmen, or the public at large, grasp the relations of money to prices, and try, on the other, to compass the soaring flights of the gossamer bubbles blown by currency cranks and credit conjurers, we must be very sorry that we did not resort either to taxation, formidable as was actually its weight, or to borrowing that meant real curtailment of spending, not of other saving alone, by the lenders, to find the revenue needed to supply the portion of the State's funds which was got with temporary convenience by this deceptive means. Dr. Cannan saw the position almost from the outset.

At an early stage at least he descried and denounced what was apprehended or appreciated by some long afterwards, and by others was not noticed, or was ignored, or dismissed as of comparatively trifling consequence, at the first and until the bitter end. Among readers of this book there may be those who think that on occasions he overstrains the influence of this single factor though he guards his estimate in other passages. But this was still unquestionably one great service which he rendered.

A second was his unmasking of the mechanism of the Currency Note Account and his plain exhibition, made clearer and more persuasive by reiterated detailed statement, of its relations to the conduct of the Government, and the behaviour of the Bank of England, and the dealings of the big joint-stock banks. With assiduous pains he untied the tangled knot, and displayed the process by which what had started professedly as a temporary way of escape from a sudden emergency in the form of a loan advanced on which interest was to be charged and a gold backing allotted, grew into a continuing mode of obtaining means by annulling the cost of media of exchange made legal tender. If a personal allusion may be allowed, I vividly and gratefully recollect the bright light shed one day on perplexities about the *modus operandi* of the issue of the Treasury notes in a letter received from Dr. Cannan. He handled *inter alia* with deft astuteness and convincing force a special crux which presents itself more than once in this book. For he distinguished the disturbance due to the seasonal fluctuations in the call for cash and pointed to the appropriate way of meeting that legitimate requirement as it periodically recurred. Eliminating such confusion he made the main point clearer, as in the letters, articles and reviews gathered here he has set out with luminous detail that compels acceptance the manner, and its achievement, of withdrawal as well as of the emission of the paper. That letter we pasted for preservation and reference into our copy of his pupil Dr. Gregory's *The Return to Gold*; and the incident suggests transition from the second to the third and last of Dr. Cannan's services which we wish to emphasise.

He was surely right in maintaining that, whatever others and he himself may think about the defects of the gold standard in normal times, a return to that was dictated by the abnormal circumstances of these years. He has been reproached for stubborn sticking to "ancient ways" and for disregard of transformation lately wrought in currency and banking theory. Some distinctions are, we think, required in this indictment. Such

recent experience in monetary practice as has been feasible through expedients of the genus of which the gold-exchange standard has furnished prominent species merits, of course, careful study and should be allowed its weight in elaborating theory. But Dr. Cannan is not negligent or erring, but better advised, when he represents as likely to mislead reversals now in vogue of the former readings of the relations of deposits and advances. The metaphor of elastic which can be stretched within though not beyond limits is appropriate to the expansiveness of banking credit. In actual fact he is at pains to show what he considers to be notable later improvements on older monetary theory, and we have understood—and there is confirmation on these pages—that he was in monetary practice sympathetic to Professor Irving Fisher's criticisms and proposal. That remedy for anachronistic instability of the measure of value has recently been scrutinised in the monthly circular of the Midland Bank; and the article, or series of articles, commands attention in view of their probable authorship. Yet, as we interpret Professor Fisher's plan, one great recommendation is, that it is designed to be "automatic." It is expressly provided that action under it should be disinterested. Despite of the cool, acute, informed inspection to which we have just referred, it keeps, we estimate, a superiority in that respect over the suggested closer earlier control up and down of credit facilities which has become so fashionable with influential groups of astute acknowledged experts. Independence of "manipulation" attached too to the gold standard, and it could claim in the past the attribute of being "automatic," if the epithet has not saved it from the vicissitudes of mining of the precious metals and changes in metallurgy. At the present moment gold bids fair to resume its place as the instrument, most universally favoured, of settling the final balances at least of international exchange; and it promises also to be relieved of the strain put on its supply by the demand for use for domestic media at any rate of the most civilised and wealthy countries. Whether a rise or a fall in its value is a probability of the near or distant future is a tough riddle which Dr. Cannan, throwing out a hint or two, does not boast of solving; and he allows that, together with the swollen issues of paper money, depreciation of gold was productive of a rise in general prices during the war and after. From these various considerations we may draw, finally, the conclusion that recent "tampering" with currency, boldly avowed elsewhere, or here shamefacedly denied but unconsciously indulged, was so disastrous that, mistrusting "management" of that sort, and generally

perhaps as offering opportunity for error of omission or for trespass of commission, we should welcome the restitution of an "automatic" system, tied to something tangible and concrete, that commanded value everywhere, in place of paper legal tender, intrinsically worthless and negligently or recklessly multiplied. For that happening, of which the balance was *pro* and not-*con*, we were indebted largely to Dr. Cannan. An appendix to the narrative obviously remains, to be added by the assimilation to, or merging in, the regular bank-note issue of the Treasury notes. Dr. Cannan perchance may then give us the further book for which we have asked, and some modifications may yet be accepted in the provisions of the Act of 1844. As it is, the present embodiment of the Ricardian proposal that paper convertible for international exchange should be inconvertible for domestic currency has become a landmark of our monetary history indicating attractive avenues to further exploration.

L. L. PRICE

The Dawes Plan and the New Economics. By GEORGE P. AULD. (Doubleday, Page & Co. $2.50.)

THE impression which emerges from a reading of Mr. Auld's book is that he has been *impelled* to write it by a crusading spirit; he has buckled on his armour to tilt at those perverters of the public mind, the political economists. Mr. Keynes is obviously Antichrist himself, but a lance must also be broken with lesser sinners of whose repentance there is not the same reason to despair, such as Mr. Moulton, Sir Josiah Stamp and Dr. Schacht. With such redoubtable opponents it is not surprising if Mr. Auld unseats himself; the curious thing is Mr. Auld's unconsciousness that he and Rosinante have parted company. It would appear that political economy has "gone off on an orgy of speculative thinking and political pamphleteering," and that the science of economics has "suddenly been emancipated from the prosy business of dealing with facts." Mr. Auld is ready to admit that "at its best, in its fact-finding rôle," the new school of economics "performs an indispensable service." The conclusion to be drawn is that economists are to marshal facts and leave them to be interpreted by Mr. Auld and other practical men untainted by speculative thinking. The theory that facts in themselves are all-important is at least as dangerous as the practice of ignoring them. The selection of facts is a difficult intellectual process, and the interpretation of them even more difficult and more important. We suspect that Mr. Auld would rather be

told that his heart was soft than that his head was hard. But softness of heart, unaccompanied by a judicial mind, is liable to lead, and has in this case led, to errors both in the selection and interpretation of facts which naturally weaken, or even nullify, the effect which it was intended to produce.

Mr. Auld's book falls naturally into three parts. The first is devoted to a summary sketch of Reparation history in the pre-experts era, in which French policy, even as manifested in the invasion of the Ruhr, is almost whole-heartedly defended and British policy condemned. Unfortunately for this view, the condemnation of British policy rests mainly on the quite unwarranted assumption that it was largely dictated by the belief that reparation could not be paid, and that it would be detrimental to British interests if it were paid. In fact, if we are to deal with facts, the policy consistently followed by the British Government was to extract the largest possible amount which Germany could be called upon to bear, and the fear of certain special interests, opposed to the general interest of the community of taxpayers, that Germany's export trade, stimulated by reparation payments, would be an intolerable competitor never deflected them from that policy. The British Government certainly held that "the reparation debt," *i.e.* 132 milliard gold marks, was unpayable—an opinion in which they were supported by that eminently practical authority, Mr. J. P. Morgan—and that insistence upon it, by preventing the restoration of Germany's credit, would effectively depress reparation receipts below the maximum possible. So far nothing which has occurred suggests that they were wrong. It would escape the uninformed reader of Mr. Auld's book that the Experts' Plan produces less than would have been produced by the successful application of the rejected Bonar Law plan of January 1923. Still more would it escape him that the constructive plan embodied in the concluding chapters of *The Economic Consequences of the Peace* was far more favourable to France than any proposals subsequently adopted or seriously discussed.

Incidentally, Mr. Auld has discovered a new reason for the occupation of the Ruhr; it was "to convince England that it was to her interest to support France in an effective, peaceable programme of collecting reparations. Even the persuasion of Germany was secondary to that purpose." The most important result of it was to convince the U.S. that it was to its interest to take a hand in finding a solution, and it left the U.S. as the arbiter in the situation. Any account of reparation, however

summary, which does not so much as refer to the effect of the official non-representation of the U.S. on the Reparation Commission is unjudicial. That the British Government was immune from errors in its treatment of the Reparation question would hardly be contended; for the most part Mr. Auld concentrates his attacks on those features of its policy which were almost incontestably sound.

The second part of the book is a description of the Plan, with some account of its meaning and its makers. There are interesting appreciations of General Dawes, Mr. Owen D. Young and Sir Josiah Stamp. As regards the last-named it is remarked that " the views expressed in the report on the assumed difficulties of transfer and the supposed distinction between the burdens of an internal and an external debt, which apparently must be attributed to him, this writer considers his least valuable contribution." This is much like saying that the first violin was an excellent member of the orchestra, but he was not a master of his instrument and his actual playing was the least valuable part of his performance. But a handsome tribute, all the more welcome coming from a Transatlantic source, is paid to Sir Josiah's undoubted influence on the Plan, and all that Mr. Auld means is that he triumphed over the handicap under which he labours in being a professed and recognised economist.

Mr. Auld calculates that the capital value of the " Dawes Annuities," on certain assumptions rendered necessary by the fact that the experts do not suggest, and could not have suggested, when the payments should come to an end, amounts to some 3½ milliard dollars less than the nominal value of the old A and B reparation bonds of the Schedule of Payments. As the payments under the Plan cover various obligations which the Schedule of Payments did not serve to liquidate, the difference must be put at a higher figure. In this case the question naturally arises, but does not occur to Mr. Auld, why the British Government are to be accused of perversity in consistently pressing for the cancellation of the C bonds, of which, on his hypothesis, nothing more is ever to be heard.

The third part of the book is given up to refuting two economic heresies to which the Experts' Report gives currency. If you intend to deal faithfully with an economist who preaches a false economic doctrine you can only do so by preaching a better economic doctrine, and at this stage Mr. Auld must be treated as an economist, albeit Fundamentalist in outlook and sympathy, however little he recognises himself as one.

The first heresy is to be found in the statement that the internal debt charge of the Allies is "to a considerable extent in the nature of a redistribution of annual wealth among the members of each nation and has little relation to the problem of a national burden in the collective sense," and that it is difficult to bring the task of paying an internal debt "into direct relation with the problem of reparation." To Mr. Auld's mind the burden of an internal debt is exactly the same, from the point of view of the community, as the burden of an external debt, and he is prepared to prove it thus. Atlantis has annual savings of five million ducats; in one year we assume that four of the five are invested in industry, and the other is lent to the Government. Assuming a uniform rate of 4 per cent., interest thereon arising is distributed in the community to the amount of 200,000 ducats. Now assume in the second case that the Government borrows nothing, but incurs a liability of one million to Oceanica, on which it has an interest charge of 40,000 ducats. The community still has its five million ducats of savings, all of which will now go to industry, and it will still enjoy interest thereon of 200,000 ducats. The amount raised by taxation is still 40,000 ducats, the same as was raised on the first assumption to provide interest on the money borrowed. Ergo, there is no difference. All that Mr. Auld has proved, of course, is that a debt of a million is a debt of a million—our old friend the identical proposition. He does not proceed to ask how the 40,000 ducats are to be conveyed to Oceanica in the form of goods and services without withdrawing those goods and services from the people of Atlantis. As against the peccant theory that an external debt is a different burden from an internal debt, Mr. Auld sets up the theory that "a tax is a tax, whether the ultimate destination is the payment of a war debt due to fellow-citizens or to foreigners." If he had followed this theory a little further he would have seen that it led him to the conclusion that if Oceanica had the power to tax Atlantis and with the proceeds of the taxation to command equivalent goods and services for consumption in Oceanica, Atlantis would be in exactly the same position as if she taxed herself and gave a similar amount of goods and services to her own nationals.

Mr. Auld can, in fact, be convicted out of his own mouth, for in an earlier passage he quite justly observes that "no evasion of the burden of an internal debt—neither by depreciation of the currency nor by direct repudiation—is possible." The external debt then must be something significantly different, for it can be,

and too often has been, repudiated. But overlooking this inconsistency, we are afraid that Mr. Auld would proceed to argue that Atlantis will not need to give Oceanica any goods and services, but can borrow the interest of 40,000 ducats, probably from Oceanica itself, and is therefore once more as well off under the second as the first assumption. For the second heresy is contained in the pronouncement that "the funds raised and transferred to the Allies on reparation account cannot in the long run exceed the sum which the balance of payments makes it possible to transfer, without currency and budget instability ensuing." How is this doctrine which "the logic of events might safely be depended on to push gradually into the limbo of forgotten fads" to be disposed of? Either the economic surplus over consumption represented by the marks collected for the reparation creditors will be needed at home as productive capital for industry or it will not. "The position of Germany under the first alternative—of needing her surplus at home—is similar to that of the U.S. before the war. That is Germany's position at the present moment, and Germany is meeting it in the way that the U.S. met it. She produces an economic surplus, all of which is needed at home. She owes money abroad; she settles her current interest and sinking-fund charges on that debt by incurring fresh debts. She is a natural debtor country." And that's that! Again, "the idea that the payment of an external debt involves a drain on the general economic strength of a country arises out of the fundamental misconception that debtor countries in the world system settle their international balances by export of capital. The fact, of course, is that capital moves not *from* but *to* debtor countries . . . and debtor countries settle their international balances by export of securities. There is no capital drain whatever on a debtor country. It is fed with capital by creditor countries."

Mr. Auld entirely overlooks the difference between a capital debt contracted for productive purposes over a period of many years and one suddenly imposed for political reasons. The one debt is "natural," and the other is not. He entirely overlooks the difference between the pre-war position of Great Britain lending to undeveloped and half-developed countries the products of which it was willing at any time to accept in payment, and the post-war situation of the U.S. lending to a highly industrialised country the products of which compete with its own and are so far as possible denied entry into the U.S.—as well as into other countries with high tariffs.

But Mr. Auld is not really guilty of the crude error of thinking that Germany will go on *ad infinitum* piling up unproductive debts at compound interest. "When Germany's second alternative of not needing her capital at home begins to run, her position will be similar to that of America in 1915 and 1916. She will produce an economic surplus, not all of which will be needed at home. That is, she will have an export surplus. . . . She will have become a natural creditor country." In other words, the much-maligned economic expert was right, and *in the long run* payment can only be made out of an economic surplus, and until it is so made it is not made at all, but additional debt is being constantly created. Mr. Auld's real quarrel is with the length of the run; he is apparently quite prepared to see the debts being accumulated for fifty years! As there is a race with compound interest over the whole length of the run he is not likely to find many to agree with him.

We have insisted on these crude economic theories at some length, for there never was a time when it was more vitally important that a knowledge of economic facts and a power to understand economic doctrine should be widespread and not confined to specialists. It is a pity that Mr. Auld should not have devoted his energy to showing the process by which Germany is to be converted in due course from a debtor to a creditor state, and the influence which the Plan, the most important single economic factor in Germany's life, will have on this process.

Finally, in an orgy of sublime inconsistency Mr. Auld concludes with a chapter giving reasons why the U.S. should remit inter-Allied debts, even if the result is to encourage the Allies to let Germany off her reparation payments. This chapter contends that "the market loans made by our investors are in no sense comparable to the inter-ally debts. The latter were not incurred for productive purposes, and provision for their payment through taxation is correspondingly difficult." It is strange to hear such an argument from an author who has just been concerned to prove that Germany, with her reparation payments, stands in the same relation to the U.S. as the U.S. did before the war to Great Britain.

A. F.

Les Effets des Transformations des États sur leurs Dettes Publiques. By PROF. A.-N. SACK. (Paris: Receuil Sirey. 1927. Pp. 608. 80 *fr.*)

World War Debt Settlements. By HAROLD G. MOULTON and LEO PASVOLSKY. Institute of Economics Publication. (London: Allen & Unwin. 1927. Pp. 448. 8*s.* 6*d.*)

The Scourge of Europe. By PROF. L. V. BIRCK. (London: Routledge & Sons. 1926. Pp. 304. 10*s.* 6*d.*)

PROFESSOR SACK's monumental work certainly defies the reviewer. In it the author has attempted to build up the first part of a complete legal code relating to the dealings of debtor States with their creditors, basing his work partly on principles of equity, partly on the pronouncements of eminent jurists the world over, and partly on actual practice. The text of the book itself, in which the principles of the code are enunciated and alternative principles rebutted, forms indeed a very small part of the six hundred pages in this volume. Each paragraph, sometimes each sentence, of the main text is followed often by as much as several pages of small-type quotation and illustration, designed to show the basis upon which the author's system rests. The book, which displays immense learning, is likely in consequence to be useful chiefly for reference, and even for that purpose its appeal will probably be rather to lawyers than to economists.

The essential contention which Professor Sack is concerned to establish is that the legal questions relating to public debts which arise in consequence of the transformation of States by revolution, by dismemberment or otherwise, ought not to be treated as matters of international law. A system of contractual rights has arisen as between the debtor States and their individual creditors, and the disturbances that result when the debtor undergoes some kind of transubstantiation should be treated as far as possible in the same way as would modifications of any other contract. Professor Sack then proceeds to apply this doctrine to the innumerable varieties of the actual world of debtor States. He deals, for instance, with the case of Federal States, of vassal States, of Colonial possessions of various types; with the principles upon which the distribution of a debt should be made between the various component parts of an old State

which becomes broken up into several new ones, and with the limits of both creditors' and debtors' rights in such circumstances. The result is a remarkably comprehensive code, which, we are promised, is to be followed by a second volume dealing with financial relations other than those pertaining to debts.

Behind this code there is, of course, no sanction. A State cannot be sued in its own courts for non-payment of its own non-commercial debts, though Professor Sack maintains that this immunity is not due to the fact that the State exercises its sovereign powers in incurring a debt, but is simply one instance of a general power of overriding private contracts which the State may equally well apply to contracts to which it is not itself a party, as *e.g.* by the declaration of a general moratorium. The sanctions of domestic law being thus not available in support of the new code, a doubt arises whether Professor Sack is wise to abandon as completely as he does the possibility of applying, in appropriate cases, such sanctions as the law of nations can claim for its support. But the plan of his book does not lead to any discussion of sanctions.

Messrs. Moulton and Pasvolsky have produced a book which will be useful to many. True, it contains 140 pages of text against nearly three hundred pages of Appendix. But nowhere else can one obtain in so convenient a form as in this Appendix the principal official documents relating to the settlement of Inter-Allied Debts, and some also of those which have made the history of Reparations.

The book itself gives a survey of the landmarks in the post-war Debt and Reparations policy of all the principal, and many of the lesser, Powers. The authors have mastered their detail sufficiently to present a coherent and intelligible tale (in itself no small task), but they do not allow themselves much liberty in their own comments. Their guiding principle is simply that payment of an external debt, whatever its origin, is not possible except for States which have both a budget surplus and an export balance; and in discussing the later phases of both Reparations and Debt negotiations they trace the steady trend of creditor's opinion away from a mere insistence upon payment of obligations due towards consideration of the debtor's capacity to pay—a movement which has not yet gone far enough in the country in which they write to induce the United States explicitly to admit that the settlement of Inter-Allied Debts and Reparations are matters which cannot well be treated separately.

A special interest attaches to the chapter upon the extent

of American cancellations. In this the authors point out that the settlements actually concluded may be compared with (1) the rate of interest prevailing at the time that the loans were originally contracted, or (2) the rate at the time that the settlements were made, or (3) the rate that will prevail in the period during which the settlements will operate. By the first standard the United States can claim to have remitted half the sums due to her in the aggregate; by the second her generosity is reduced to 43 per cent.; and by the third the debtors, with the aid of some prophetic faculty, can make out a good case for the view that their obligations have actually been increased.

Professor Birck also writes of public debts. His book, however, labours under the disadvantage that it is extremely difficult to see the wood for the trees. He has brought together a large number of casual facts and figures about European debts in the last six centuries; but these are so casual that their significance is not always easy to appreciate. It is only evident that he has a general (but not undiscriminating) dislike for large public debts, and that he has no difficulty in showing that the management of these debts is not a particularly honourable chapter in the history of European public finance. The theoretical section of the book, which occupies its first half, contains on the whole rather more interesting matter than the second, purely historical, part. In the former the author is bold enough to lay down some definite principles of sound finance, which, in his judgment, should decide the question whether any given expenditure should be financed from taxation or from loans, or abandoned, and he has some good hits at the fallacy (dear to the business world) that a National Debt is a useful addition to the national capital. The adoption of his principles would, he thinks, not infrequently lead to abandonment of the projected expenditure.

The book would be much improved by an index; and the author would do well to revise his spelling of English names. "Huskison," "Vansittard," and "Norman Angel" are examples. He seems, moreover, to be a little out of date in his citation of certain eminent English economists as advocates of a Capital Levy for Debt redemption.

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Money. Translated from the German of Karl Helfferich by LOUIS INFIELD. Edited with an introduction by T. E. GREGORY. London: Ernest Benn, Ltd. 2 vols. Pp. xiv + 660. £2 12*s*. 6*d*.)

THIS massive piece of learning has been rendered into English by a competent and diligent hand. It consists of a substantial historical survey, a comprehensive theoretical treatise and some notes on the situation in Germany from 1914 to the spring of 1923. The theoretical part falls into two main sections. One deals with the component parts of a currency, their relations to each other and to the standard metal, legislative and administrative regulations concerning issue and convertibility, the management of foreign exchange, with those kind of problems, in fine, which were the subject of Knapp's State Theory of Money, with money considered in its "platic, genetic and dromic relations." The other section treats of the value of money and conceives of the problems, though not always of the solutions, roughly as they are understood by English writers.

Of this section on the value of money (Part II. Sec. 3) much might be said in praise. Indeed we should be grateful merely for its presence. Its inclusion represents a revolt of Helfferich from his teacher, Knapp. In an excellent footnote on pp. 493–4 he justly scolds Knapp for his failure to grasp even the existence of a problem connected with the value of money in terms of goods. Helfferich shows in this section common sense and clarity, a cautious modesty and gravity which are all worthy of praise. Readers, however, who deem this the most vital part of the subject will be disappointed that it only covers 109 out of the 627 pages of the whole book. Not only is it short but it is also in a serious way defective. Neither here nor anywhere else does Helfferich attempt an analysis of credit. It is true that he safeguards himself by the promise of a supplementary volume on banking. But in the present condition of monetary studies the theory of credit cannot be relegated to a secondary place. Helfferich has made his theory of money a theory of currency and has thought that it is possible to elaborate a complete and self-contained theory of the currency without more than a passing reference to credit. Not that he upholds a crude quantity theory. He obviously believes that credit plays an important part in determining the value of money, but he does not make the theory of credit play an important part in his book. He has perceived the truth but not absorbed it; he has not made it enter into his system, which,

without it, is arid and lifeless. This will probably be the last notable treatise on money written in such a form.

Within his limitations Helfferich is sound and good. He lacks, it is true, the incisive generalisation of English writers on the subject; his treatment is more discursive and the unity of thought binding together a variety of considerations is often not apparent. The thought is present but not articulated. Only one other important criticism may be brought against this part of the book. On pp. 567 ff. Helfferich lacks that conception of the real rate of interest which Marshall and Professor Cassel have made familiar. He takes the nominal rate of discount at its face value, and argues, in the vein of earlier writers, that because money is often dear in a time of rising prices, the cause of the price change cannot be "on the side of money." Indeed certain sentences seem even to suggest a naïve confusion between the value of money and the price of money in the money-market sense. These pages are very unsatisfactory.

The other section on theory, in which Helfferich covers the same ground as Knapp, displays many of his virtues, his good sense and nice discrimination. It lacks the fascinating brilliance of Knapp, but where the two differ, Helfferich's criticisms are often just. For instance, he argues well that "the differentiation between 'valuta' and 'accessory' money put forward by Knapp as the most important of such functional differences is untenable" (p. 396); he condemns Knapp's resuscitation of the old balance of trade theory in a new form to explain the rupee exchange fluctuations (p. 426); he holds that Knapp oversteps the mark when he contends that the fixing of a parity between gold standard currencies is the matter of as arbitrary a decision as the fixing of a parity between free currencies (p. 437)—a criticism which does not invalidate Knapp's important view that "exodromic" measures are necessary in both cases.

The historical section is a storehouse of useful information and by itself justifies this translation. Parts of it are, however, defaced by the presence of obsolete debating matter. In 1903 Helfferich still wrote and felt as a monometallist and not as an impartial historian. The spirit of these chapters is in marked contrast to the judicial but by no means vague or indeterminate attitude of Marshall, who would have had as much right as Helfferich to plead, had he needed an excuse for partisanship, that he had lived through all the old battles. The section on "the causes of silver depreciation" (pp. 188–98) sins most in this respect. Helfferich wants to prove that the fall of silver was not

due to the monetary legislation of the 'seventies. He oddly supposes that it will help him to establish this proposition if he can show that there were sound and sufficient reasons for the legislation. He would have us argue that because the measures were desirable on other grounds, therefore they could not have had the bad effects commonly ascribed to them. Again, from the fact that the French bimetallic arrangements did not prevent certain fluctuations in the gold price of silver in Paris it cannot be inferred (as on p. 195) that "the deviation from the legal ratio could just as well have taken place on much larger proportions, if any of the relevant factors had developed more strongly to the disadvantage of one or other of the metals." Such a line of reasoning, although common in the controversial writings of the period, is unworthy of a place in the stiff and at times starchy pages of this formal treatise. To prove that the legal ratio could not have been maintained, Helfferich should have given a quantitative estimate of the capacity of the Latin Union and the United States to absorb silver. No such computation is made. He is not entitled to deny offhand that the bimetallic countries could have bridged the gap between 1873 and the 'nineties. With regard to the practical currency difficulties to which he attaches great importance, we now understand that many of them could have been overcome by the issue of silver paper. But the times were no doubt unripe for such a development. In no part of this book does Helfferich shake himself quite free of considerations relevant to this controversy, which was evidently the mainspring of his interest in monetary theory. Echoes of the old war cries recur in the most unexpected places.

The book as a whole may be regarded as a sustained argument for the gold standard. Helfferich takes it to be the natural and perfect end of a long development. Writing in 1903 he thought that to aim at still higher things was visionary and unpractical. Writing in 1923 he felt that the gold standard itself was almost a visionary ideal for Germany. He did not think that a quick return to it would be possible.

Helfferich has a weak view about German inflation. The quantity formula is only a mode of expressing truths which may be stated otherwise. Yet this mode seems to fortify the constitution against error in practical matters. Helfferich regards the German inflation as an inevitable result of the passive trade balance and the pressure on the foreign exchanges. He says, "the monetary machine and its working, therefore, aided in the development pursued by wages and prices, but only in a secondary

and passive manner." He holds that business would have come to a standstill had the State not issued sufficient paper to cover whatever prices of import goods corresponded to the latest exchange quotations; budgetary difficulties played a secondary part.

Professor Gregory has embellished these volumes with useful appendices relating to the years since 1923.

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Gewerbepolitik. By KURT WIEDENFELD. (Berlin: Julius Springer. 1927. Pp. 213. 9.60 *m.*)

Die wirtschaftliche Konzentration. By DR. JOSEF GRUNTZEL. (Vienna: Julius Springer. 1928. Pp. 78. 3.60 *m.*

THE former is the thirty-ninth volume of the *Enzyklopädie der Rechts- und Staatswissenschaft*, edited by Dr. Spiethoff. It is an exhaustive study of the forms of industrial organisation, from the domestic system upwards, but its main concern is with modern developments in the structure of the great industry. The author's conclusions on these results have been referred to in recent numbers of this JOURNAL, and this volume is their systematic exposition, in which the types of combination are led up to by a study of the large and small undertaking, and related at the other end to the problem of Industry and the State. The "mixed works," the "concerns," and the Kartells occupy the centre of interest. Of these, the two former are combines, whether horizontal or vertical, but the mixed works imply a closer control from the top of actual industry and its arrangements, while the concerns imply rather a general *Kapitalpolitik*, which only lays down general lines of policy, and interferes less in the executive sphere. By contrast, of course, the Kartells are based on contract. A lengthy and careful examination is made of the advantages in technique, marketing, and personal initiative, to the mixed works. For example, the vertical mixed works, since their reputation depends on the quality of final products, are able to assure from the base upward a proper standard of materials and work; or, again, the secrecy of special machinery leads to own production of that machinery rather than to patents. But marketing is a stronger influence than technique. Partly this influence depends on *Anpassung* pure and simple, the ordinary administrative desire to keep a succession of stages of production in the closest touch with each other and with the final market;

partly also on the influence of Kartells, from whose price policy the mixed works are able to free themselves. The author has scarcely resolved this conflict; it is a real conflict of two types of procedure, and to what does it tend? The mixed works, having their feet, thighs and shoulders in lower Kartells, create for the latter the problem of reserved quotas, and the many complications which have resulted do not yet show signs of being reduced to the equilibrium of an industrial *system*. In the Concerns, less attempt is made than in the mixed works to have an exact adaptation between quantities produced on each level; but the distinction, as the author agrees, is often not very clear on this ground, and is rather to be referred to a distinction between industrial finance and industrial control.

It is unnecessary to deal again with Dr. Wiedenfeld's account of Kartell policy. He has, however, written a review of the whole movement from the standpoint of its significance to production, costs and prices. He thinks that the Syndicates' policy may check new sources of demand, since they usually exist on the lower levels, and are too far from the final consumer to feel that lower prices in falling markets will be effectual. What, then, is the conclusion, since this consideration will apply to moderate changes in their prices *either way?* The possibilities of real adjustment appear to be left to the mixed works. As to quality of production, the author thinks that the policy of Syndicates, in requiring buyers (at least in some important cases) to take mixed qualities against an order, prevents the worse qualities from being lost, and is a conservation of resources as a whole. As regards costs, we are left with many unsettled questions. It is not certain that the laying up of uneconomic works reduces costs; it is a matter of calculation. Reserved production by mixed works means that Kartell sales are fewer, and so bear per unit a higher cost of Kartell administration; this detracts considerably from the advantages of common selling. On the other hand, given the Kartell prices, each member gains by any reduction of his own costs. Finally, there is the perpetual problem of the new outsider.

The charges for idle works fall on prices. Of the operating works, it is not certain whether it is those of highest cost which are considered in price-fixing. If not, they will break off, unless average prices are combined with some form of profit-sharing. This again makes the stronger members restive. But at whatever prices, the aim is stability, not the following of the conjuncture. Here Dr. Wiedenfeld (p. 146) makes a comparison between general

prices and freights and the rate of interest, in which he departs from the view that banks should use that rate as a lever on the industrial expansion. He wants, not adjustment, but rather stability of prices to be imposed at a number of points. Of course, any organisation can hold its prices fixed, but what is the analysis of this purely descriptive stability? Finally, there is the question of the export prices and bounties.

In its general social effects, Dr. Wiedenfeld thinks the whole movement favourable to the Trade Unions, which can press their claims more strongly; and also to the industrial leader *vis-à-vis* the shareholders. There are many reactions on economic independence. Though there may be fewer positions of leadership, much responsibility may be left to works managers and leaders. It is up to the great leaders to value suggestion and criticism from below. The best leadership is more necessary under combination than under competition, because so much more depends on mistakes.

This is an elaborate and complex book, the critical observation of a new industrial phase in the country where at present the attempt to straighten out shows its most interesting features.

Dr. Gruntzel's shorter book follows the same plan; he introduces the higher forms of organisation through a short study of the establishment and the enterprise. The main part of the book is a simple description of the types of higher organisation, and for this purpose it is a useful handbook. The chapters on cost, prices, and effects on labour make some points which Dr. Wiedenfeld has left implied; but they are rather a summary of the well-known arguments. He puts the responsibility for high prices, and for continuous dumping, on faulty tariff policy, not on the combines; and *asserts* the tendency to stability of prices under the latter. The most original section deals with influences on labour. He argues that the combines imply an organisation which is adjusted to that of labour, so as to create the possibility of relationships between the two sides on a larger and more durable basis. His handbook is one of the clearest and most concise available summaries of the existing situation.

D. H. MACGREGOR

Traité général de science économique. Par CHRISTIAN CORNÉLISSEN. Tome III, Théorie du Capital et du Profit. 2 volumes de 466 et 662 pages. (Paris: Marcel Giard, éditeur. 1927. Prix: 120 francs les 2 volumes.)

M. CORNÉLISSEN'S general position is indicated by the following quotations: "What characterises the capitalist from the sociological point of view is his quality of owner of the materials of production. This allows him to impose his will on the producers and to consider only his own interests" (Vol. I. p. 23). "Falsification and fraud are the inevitable consequences of the present industrial system" (Vol. I. p. 348). "Capitalism has degenerated into a régime of extortion both from workers and consumers" (Vol. II. p. 631). "Modern production is characterised by a never-ending struggle between two classes of society, whose material interests are opposed" (Vol. I. p. 461). "The State is the instrument of domination in the service of a class" (Vol. II. p. 118). "Profit in its actual form is intimately bound up with a definite industrial system corresponding to definite social and legal institutions" (Vol. I. p. 454). "A transformation of society is required, which will make production serve the direct satisfaction of social demand and not the personal interests of a few business men" (Vol. II. p. 384).

From this point of view, M. Cornélissen surveys the organisation of modern industry and trade. His work is distinguished from others of a similar character by the number and the variety of its illustrative examples—many of them unfamiliar to the English reader. M. Cornélissen is widely read in the economic publications of all countries—not merely monographs, but government reports, parliamentary debates and financial periodicals. His thousand pages bristle with facts and figures. Unfortunately it is not always easy to determine their scientific value or their exact bearing upon the subject discussed.

M. Cornélissen has much to say on a great many subjects of very diverse character. He draws up a scientific classification of capitalist concerns. He refutes the Marxian prediction of the small man's inevitable disappearance. He has chapters on Division of Labour, Specialisation, Centralisation and Decentralisation of Production, and an unfavourable discussion (on old-fashioned lines) of "Taylorisation." We are treated to an exhaustive and even exciting account of Trusts and Cartels (though no mention is made of the Webb–Pomerene Act or the German Cartel Court); their early struggles; their unscrupulous

methods; their successful fight with the State; their influence on industrial organisation; their "capitalisation"; their connection with economic crises; their international development. Taking his facts from the Reports of the (American) Industrial Commission and the Kontradiktorische Verhandlungen, M. Cornélissen prefers to stress the nefarious activities of the past rather than contemplate any possible power for good in the future.

A long section, containing much historical matter, is devoted to exploring the problem of Economic Crises. "Their fundamental cause is lack of harmony between the accumulation of the fixed capital of society and the movement of social consumption. The solution lies in a control exercised by society over this accumulation and the increase of production in order that this increase may correspond as exactly as possible with the development of social consumption."

There is a chapter on World Commerce, abounding in platitudes—the weakest in the book. "Solutions of the Social Problem" are considered in a section of surprisingly mild and qualified conclusions. We are enjoined to distinguish between the democratisation of industrial ownership and the democratisation of industrial management. "The workers will not be able to direct industry themselves, but they can own industrial concerns and buy organising ability at the market price. They will occupy the position of present-day shareholders, retaining a general right to control their directors."

There are chapters on the Utilitarian conceptions of profit and the Marxian theory of Labour Value, in which Marshall, J. B. Clark and Marx are severely handled.

M. Cornélissen seeks to make a realistic study of the nature of profit. He shows how the average rate of profit varies according as one considers different branches of industry or different periods. He emphasises the "futility of any solution of the problem of profit which takes no account of those who dominate production. We live under the control of Cartels and Trusts." He investigates what he regards as the principal sources of profit—the exploitation of labour, directive ability, monopolisation of natural resources and speculation. To each he gives a separate chapter and tries to show (by means of carefully selected instances) how each is the cause of profit. Of course, normally the profit realised by a given concern results from a combination of various causes. It is difficult to lay one's finger on a particular cause or to attribute particular amounts of profit to particular causes. Nor does M.

Cornélissen fare better when he turns for guidance to balance sheets. He emphasises himself the extreme caution required for their analysis and for making comparative statements, and he deplores the unfortunate scarcity of precise information. Next, M. Cornélissen tries to trace the influence exerted on profit by labour conflicts (the effects of the English coal strike (1912) on the receipts of railway companies); by wars; by trusts and cartels; by the trade cycle; by State intervention (he selects as instances the various conventions in the Sugar industry, the results of Protection in Catalonia, the French Tariff Law of 1910, the Dingley Tariff of 1897, the French shipping bounties, the Brazilian control of coffee). These chapters are useful as a convenient accumulation of curious details. But the information given is not thoroughly sifted. Little attempt is made to indicate how far the various instances submitted are typical and what is their exact significance. M. Cornélissen's realistic study of profit merely impresses us with the complexity of the problem and the danger of facile generalisation.

J. LEMBERGER

The University,
Belfast.

Four Kinds of Economic Value. By C. M. WALSH. (Harvard University Press. Pp. 138. 8*s.* 6*d.* net.)

THIS book may be of interest to those who do not like thinking in geometrical figures. To those who are familiar with Marshall and his followers, it will not seem that any new light is thrown on the subject of value by this discussion. The author's four kinds of value seem to be the familiar conceptions of total utility, which he calls use-value; marginal utility multiplied by quantity, which he calls "esteem value"; cost-value, which seems to be equivalent to aggregate cost, and exchange value. One might say that it is necessary really to have more than these four distinctions, especially to distinguish marginal utility from the value which the author calls "esteem value." Cost also has to be distinguished as having several different senses, and it is not clear that any useful purpose is served by calling any of them a kind of "value." The writer is mainly interested in discussing the difficulties and confusions which arose in the earlier days of economic theory, and those who are interested in the history of economic thought will find this small book useful, though lacking the pungency of Dr. Cannan.

The marginal note on p. 81 can scarcely be accepted as an

accurate statement of Marshall's view on Ricardo. Marshall certainly did not draw any categorical conclusion that "cost of production determines value." He points out that Ricardo, for the purpose of the discussion in question, takes a case of commodities produced under conditions of "constant costs," but of course it is perfectly obvious to any reader of Marshall that no one was better aware than he that when cost of production per unit varies with the quantity, the conditions of demand will affect the normal exchange-value. Ricardo, no doubt, was not very clear in his language, and, as Marshall points out, often supposed that the reader would amplify his too abbreviated sentences. He gave what might fairly be called a first approximation of the theory of value.

All the earlier discussions of the theory of value are somewhat confused by the fact that the distinction between marginal and total utility was not clearly formulated, and also by the associated difficulty of clearly expressing the difference between a movement along a curve of demand or of supply, and an alteration of the position or shape of the curve. To the reviewer it seems that the discussions of these theories would be much simplified by admitting the usefulness of a certain amount of geometrical diagram.

C. F. BICKERDIKE

Modern Industry. By E. L. BOGART and C. E. LANDON. (Longmans. Pp. 593. 16*s*.)

THERE is still much doubt as to the ideal method of introducing the beginner to the science of economics. That largely adopted in the past, in particular in this country, has been to lay down, in definition form, the skeleton of economic theory, with the theory of value and price as the nerve centre, leaving the student to fill in the flesh of example and illustration from his own experience and knowledge. In America an alternative method is obviously being tried out. The student, it is asserted, can hardly be expected to grasp the abstract principles to which business and industry conform before his mind has been primed with the actual facts of industrial conditions around him. The very marked growth of training for commerce in that country has hastened and supplied some justification for this placing of the descriptive before the analytical, and the possibility of allowing fundamental economic theory—"those necessities which are of a purely economic nature and which cannot be arbitrarily mastered by the will of man," to use a phrase of Professor Cassel—to emerge slowly from the parade of a wealth of fact drawn

from most branches of knowledge is, at first sight, a desirable solution of a delicate problem.

The Professor and Assistant-Professor of Economics of the University of Illinois have, in this volume written for "Freshmen," attempted to supply a description of modern industry as such a background to the study of economics. The scope of the book is wide. Much of the material in it would, in this country, fall quite definitely outside the domain of the teacher of economics. Probably the most important part of the book is that series of chapters which stress the economic consequences of geographic and physiographic factors. The relation between industry and eugenics and ethnology are not ignored. One chapter is entitled "Psychology and Industry." There is a series of studies of the important industries in U.S.A., with a large amount of technical description. We learn something of "The Ascetic Doctrine respecting Wants." It almost makes one believe that the authors do not attach much importance to the advantages which they claim for Specialisation.

But success or failure in this gigantic task can only be judged by the degree to which the student is prepared for more advanced work, by the extent to which the apparently amorphous mass of economic fact is shown to have a definite and permanent internal structure. Generalised description of economic phenomena, if it is to be used for this purpose, must rigidly limit itself on many sides. Above all it must share with economic science the quality of strict impartiality. If the science deliberately divorces itself from ethical considerations, studies preparatory to its approach must foster, in the student, the attitude of scientific absorption within a deliberately narrowed field. Description must never sink into condemnation of what is believed to be wrong or approval of what is judged desirable. Generalisation is the monopoly of theory, and statements which claim universal application must be based upon something more than a collection of facts which, however large, can never be but a part of the story.

The work of Professor Bogart and Assistant-Professor Landon hardly satisfies this condition. Some of their asides, either upon the general economic process or particular sections of it, are ingenuous enough to have come from one or other of the societies which all political parties at the moment appear to be founding for the distortion of economic laws to buttress political programmes. The distributive process has a high moral character—"in spite of the fact that [the worker] obtains from others more than he himself could produce in ages, there is no robbery. He has earned all that he has received, as have all other members of

society." From time to time there are unnecessary incursions into the fields of uncertainty—"there are few parasites in our busy workaday world, who simply sponge upon society for a living without giving a fair exchange." To say that "each for all and all for each is as true of industry as it is of other activities," seems to be quite fallacious whilst competition remains a common relation between two industries. In those chapters of the book which explain the co-operative nature of industry there is a constant tendency, quite unnecessary to the argument, to stress the necessity for the different middlemen instead of merely noting their existence. It is dangerous to say that "successful manufacturing necessitates the possession of the most modern equipment possible" when so many other items influence the cost of production; when we find much machinery in the Lancashire cotton industry thirty or forty years old, and when both in India and U.S.A. the cotton industry is moving from an area where technical efficiency is high to one where labour costs are low and raw material adjacent. There is little in the "best of all worlds" which is found in this book to point to the many unsatisfactory sides of modern industry, even in U.S.A., such as those which H. B. Butler has pointed out recently in his *Industrial Relations in the U.S.A.*

If, however, the target has not yet been hit fairly, the authors are to be commended for having set it up at all. They have succeeded in providing a wide survey of the working of industry in the satisfaction of human wants. They have resurrected Hearn's *Plutology*—a book that has been long and unaccountably neglected. They have shown the interconnection of economics with geography and kindred sciences. And one feels that the limitations of this book are due perhaps to the intractability of the audience for which it was written. In no other way can it be explained that the list of suggestive questions placed at the end of each chapter should contain, after the chapter on the fishing industry—"It is said that oysters should be eaten only in those months in whose names the letter 'r' appears. Why?"—and, after the chapter on invention—"What is a genius? Are you acquainted with one"?

JOHN JEWKES

Currency, Credit and the Exchanges (1914–26). By WILLIAM A. SHAW, Litt.D. (Harrop. Pp. 203. 7s. 6d. net.)

AFTER the apologist of the banks the apologist of the Treasury. Dr. Shaw is at one with the late Dr. Leaf in asserting the inability of the banks to create credit, but the prime object of the first

two of his three chapters is to rebut the charge that the Treasury was in any way responsible for the inflation of 1914–20. Beginning with the inadmissible premiss that neutral States had, at the outset, no temptation to increase their currency supply, he points to the similarity of the changes in the cost of living in Britain and Switzerland, argues that here, as there, the rise was due to world causes, and concludes that the increase of the local currencies was a consequence, and not a cause, of the increased prices. The awkward fact that the cost of living in the United States ran about 20 per cent. below that of Britain is explained by the higher level at which the movement began there; though why this should have made the course of increase less steep is not made plain.

Dr. Shaw is not concerned, however, merely to repel an attack: much of the book is an exposition of the positive virtues of the Treasury note. Its advent, we are told, "transcends in importance any other event in the economic experience of the modern world," and "by its means we have evolved the true theory of money" (pp. 66–7). If our expectation of something new is dashed when we are told that the theory rests upon the hardworn principle that goods purchase goods, it is amply satisfied by the further unfolding of Dr. Shaw's ideas. The value of the British currency depends, in his view, on that of the interest-bearing securities in the Currency Note Redemption Fund. The Treasury note is an ideal form of currency, since it is self-regulating and automatic in its issue; and the limitations of the maximum issue, following the recommendation of what Dr. Shaw usually calls the Cunliffe *Commission*, is, he holds, a work of supererogation. It is, of course, this very automatism, making the note responsive to the expansive tendencies of credit, that led one school of economists to press for a managed currency and another to commend the return to gold. But the one course Dr. Shaw declares to have been unnecessary and the other to be impossible.

If in defending the note against the charge of inflation Dr. Shaw had urged that price changes were initiated by credit expansions, and that the increased note issue was the result of this, his exposition might have won assent from many. But when he declares roundly that neither joint-stock banks, Bank of England, nor Treasury can create credit he parts company even with the Leafites. And when, insisting that it is expenditure and not borrowing that produces inflation, he denies that the form of this borrowing has any effect on the result, one who has sincerely tried to follow the argument can only conclude that he has failed to take account of all the facts of banking practice.

Much is made of the difference between the automatic currency of Britain and the forced currencies of other European countries. Dr. Shaw will not admit that the discount of sterling in terms of dollars, before April 1925, represented a depreciation of the Treasury note; yet, using a similar measure, he transcends arithmetic by giving (on p. 146) the *percentage* depreciation of the Mark in 1920 as 1,625.

There is much good work in Dr. Shaw's description of banking systems and exchange controls, leading up to his scheme for an Imperial exchange mechanism based on the principle of the Anglo-Egyptian exchange. But, throughout, the exposition suffers from his impatience of established theories. Professor Irving Fisher may be mildly surprised to see a commendation of "the almost complete disregard which all American economists have for the quantity theory" (p. 46). But what will Professor Cassel say if he should read that the doctrine by which he is best known was first evolved by Mr. Robert Benson in the *Daily Telegraph* of December 15, 1919? "Mr. Benson coined a phrase, and the phrase was taken up by Professor Cassel and elaborated into the purchasing-power parity theory" (p. 189). Readers of this JOURNAL will hardly need to be reminded that Professor Cassel adumbrated the idea as early as March 1916, and that the alliteration appeared in these pages fully twelve months before it adorned Mr. Benson's article. It is an error that a historian of currency and monetary writers might easily have avoided.

T. S. ASHTON

Credit and Currency, National and International. By REV. WALTER GOODLIFFE, M.A. (P. S. King & Co. 1927. Pp. 178. 8*s*. 6*d*.)

THE author of this book holds that the world's currency troubles began in 1844. He believes that the obligation imposed on the Bank of England of buying gold at a fixed price of 84*s*. 11½*d*. an ounce—he is, of course, wrong in this price—destroyed a pre-existing free market in gold. He asserts that during the nineteenth century other nations adopted sterling as a unit of reference by use of which alone they were able to express the values of their currencies in terms of one another, and that, in consequence, the pound became subject to disturbing alien influences. Since there exists no international currency issued by constitutional authority the world's trade has to be done on credit instruments issued by private corporations; and the instability of these instruments renders their value an easy prey

to the rapacity of financiers, of whom we are given an account vivid and almost mediæval in its naïveté.

Readers who can follow Mr. Goodliffe so far may find interest in the elaborate design for a world standard of value to be known as the "Mundic," into which the moneys of all participating nations may be converted at unvarying rates. And even economists must at least respect the vigour and earnestness which this clergyman of seventy-five, cut off by illness from works of reference, brings to the solution of a problem the very existence of which they will hardly be persuaded to admit.

T. S. ASHTON

Problems in Marketing. By PROFESSOR MELVIN THOMAS COPELAND. Third Revised Edition (Chicago and New York: A. W. Shaw Company. London: A. W. Shaw & Company, Ltd. 1927. Pp. xiii + 819.)

THIS book is a collection of problems recorded, for the most part, by the research organisation of the Harvard Graduate School of Business Administration and is designed to serve as a text in classes where the case system of teaching is employed exclusively. In addition, therefore, to the examples which are based on actual business experience in the United States there are sections dealing with general principles. Much information is given also concerning sales practices and policies in several important divisions of North American Commerce; and there is a useful appendix which exhibits as examples of the classifications of accounts in retail and wholesale trade, schemes prepared for grocery firms by the Harvard Bureau of Business Research.

The revision which the work has undergone in the editions so far published points to a growing understanding of the theory of marketing which, as the author explains, is still in the early stages of formulation. Unimportant topics (such as sales correspondence) in the second edition give place to material of more fundamental significance in the third; and discussion on such points as price policies and cost of doing business is invited in an increasing number of examples from those who seek to solve the problems set. Moreover, developments in business practice and modification of marketing methods also call for recognition and require the substitution of new cases for many of the older problems.

It is not likely that such a work will make a wide appeal to English readers. Indeed, even in America teachers and students outside the Harvard School probably feel that by itself it cannot

carry them far. It seems to require something to supplement it which the author himself, no doubt, supplies in his own classes. But in the hands of a capable teacher who can persuade himself that he has discovered or learned important principles applicable to what is now understood by marketing the cases or problems will prove exceedingly suggestive. It would not be difficult to find parallels in British business to some of the more important cases set out in this work. Several Faculties of Commerce in England possess similar sets of examples for use in class collected during the changing commercial and industrial situation of the past few years; but probably nothing so comprehensive as this Harvard collection is to be found in any British University.

J. G. SMITH

University of Birmingham.

The United States Oil Policy. By PROFESSOR JOHN ISE. (London: Milford. 1926. Pp. 547. 35*s.*)

THIS book is a plea for a policy of conservation. The historical part is of much interest, tracing the history of exploitation in the main fields from early times, ever since "the market in Pittsburg became very dull, for a flatboatman would occasionally introduce a barrel or two at once" and create a glut. The theme is developed, with considerable repetition, that private enterprise in the oilfields has meant waste of the product, of capital, and of energy; and has been accompanied by many undesirable social results. The influence of the Standard interests, based on unfair methods, great ability, the use of independent cash reserves, and certain natural conditions (especially in transport), has on the whole been for good; though it might have been better done. The author proceeds to a discussion of the probable duration of the fields, a very difficult subject, and concludes that in any case the remaining public lands should be carefully conserved. Though somewhat loosely constructed, the book is packed with incident that is valuable for the study of private enterprise, on both the economic and the psychological sides, especially in relation to monopolist construction.

D. H. MACGREGOR

The Cotton World. By J. A. TODD. (Pitman. Pp. 236. 5*s.*)

THE concentration of large industries into small areas has probably nowhere been carried to the same extreme as it was during the last century in the cotton industry of Lancashire and surrounding districts. The history of the subject has been fairly dealt with by many writers, but the present discontents have

brought to light a strange absence of adequate research work into the structure of the industry. The high degree of horizontal organisation has misled many students into examining only one of the horizontal sections, but it is now being realised that many sections have not been studied at all. Statistics are fairly plentiful at the two ends of the industry. The requirements of vested interest in agriculture and in futures markets ensure an extensive supply of information about the cultivation and distribution of the raw material, and there is not much more which can be done except to devise means of greater accuracy in estimating the size of crops before they are grown. In the next stage also, the world's consumption of raw cotton by spinners is approximately ascertained at six-monthly intervals. A fog of darkness then descends until the returns published by the Board of Trade enable the volume of export trade in yarn and piece goods to be examined. The knowledge thus made available has been carefully sifted, but it refers almost entirely to the volume of production, but hardly at all to the methods of trading, and to the organisation of the industry. Lancashire is gradually waking up to this deficiency, and the work now being done at Manchester University, and particularly at the Cotton Trade Statistical Bureau, will eventually throw some light on the situation.

In the meantime Mr. J. A. Todd, by compiling a summary of lectures delivered at the Liverpool School of Commerce, has produced a text-book of considerable value. Some of these lectures were delivered by Mr. Todd himself, or by independent observers similarly placed, but most of them came from men actually engaged in the various processes of the industry. The exigencies of space and the limitation of purpose to that of a text-book are points which only reveal how much still remains to be done in the way of analysis and observation before the most confident preachers of reform in Lancashire's methods can be confident of the efficacy of their remedies.

Although this book is published as a text-book for students, it attains a higher classification in economic literature through Mr. Todd's failure to preserve a sense of proportion. Being himself chiefly interested in raw cotton, and occupied mainly in educating the youthful members of the Liverpool market, he has devoted more than a quarter of the book to a study of the Liverpool futures market. The error is quite justified by its result, which is undoubtedly the clearest analysis yet published in English of the working of a futures market. More space is devoted to the subject in Mr. W. H. Hubbard's *Cotton and the Cotton Market*,

but Mr. Todd's treatment is of more value to the British reader because it is less preoccupied with the point of view of the American merchant. Professor Ugo Caprera also published in 1926 a useful study entitled *Le Negoziazioni Caratteristiche dei Vasti Mercati*, but devoted most of his time to grain futures. Mr. Todd has brought out several important facts, many of them only half known to most operators in Liverpool, but to the reviewer's own knowledge they have all been carefully checked. He points out that "the so-called futures contract is fundamentally the same as all the other contracts in use in the Liverpool market." Presumably he wishes here to remind Liverpool that the spot contract is also a contract for deferred delivery within a short limit, and the only essential difference is that instead of specifying one particular grade of cotton, the futures contract "allows a certain choice or elasticity in the exact grade or quality that may be tendered."

Closer attention might perhaps have been paid to the confusing use of the term "basis," but it would have been difficult on this point to avoid duplicating the extensive explanation given by Mr. Hubbard. Each commodity dealt in by a futures market must be amenable to a high degree of standardisation, and the price paid for the actual commodity will differ from the futures quotation to the extent of its variation from the basis quality. The cotton market illogically uses the term "basis" to denote this degree of variation from basis, and a consignment of middling possesses a "basis" because an even-running lot is of greater value than a contract which permits a slightly inferior quality to be delivered. Mr. Todd describes how the cotton spinner can ensure himself against fluctuations in "basis" as well as against fluctuations in the basic price of middling, but he does not sufficiently emphasise the fact that nowadays the average spinner of American cotton in Lancashire seldom hedges his purchases of cotton on the futures market. He relies entirely on the system of purchase "on call," which enables him to ascertain his "basis" beforehand, and then demands, or tries to demand, for his yarn the futures price on the day of sale, plus the "basis" previously fixed, plus a margin which may represent, but often does not, the estimated cost of spinning.

In order to prevent the manipulation of the market by large operators, Mr. Todd draws attention to the way in which, during the war, the futures contract was divorced from the necessity of delivering or receiving actual cotton. The suggestion is made with diffidence, but it is worthy of further examination.

OWEN JONES

Sugar Beet Costs and Returns for the Year 1925–26. By A. BRIDGES and R. N. DIXEY. (Oxford: Agricultural Economics Research Institute. Pp. 71. 2*s*. 6*d*.)

THIS little book of 71 pages brings a very welcome addition to our limited knowledge of the cultural requirements and economic possibilities of a crop which is yearly becoming more and more important in the internal economy of the farm. While, as the authors themselves would be the first to admit, it does not by any means provide the last word on the subject, yet there is equally no doubt that it does give us in a most interesting form a thoughtful survey of the most comprehensive and reliable material at present available.

The practical value of the book at the present time can scarcely be over-estimated. It meets the needs of the present growers to be supplied with comparative figures of costs of growing and handling a new crop. To the farmers who are still contemplating the introduction of the sugar-beet crop it gives concrete evidence on which to form more reasoned opinions as to its immediate economic possibilities. The chapter on the utilisation of the by-products brings out strongly the food value of the tops and of sugar-beet pulp, and should be read by all present and prospective growers. The table given in Appendix II dealing with the "value of the subsidy" is well worthy of study by all who have any hand in fixing future prices to be paid by the factories to the growers.

A. G. RUSTON

The University,
Leeds.

Canadian Labour Laws and the Treaty. By BRYCE M. STEWART, Ph.D. (Columbia University Press. $6.00.)

DR. STEWART summarises and reviews the whole of the Labour Laws of Canada in a volume of 500 pages. The arrangement is novel and might well serve as model for a series of comparative studies, the basis being the nine principles of the Labour Section of the Treaty of Versailles. Unfortunately the framers of that section had not very clear ideas of what they intended to include, and they did not always make it clear what they meant by their principles. Dr. Stewart's treatise shows, however, that as pegs on which to hang an account of the growth and present position of Labour legislation they do not serve badly.

Canadian Labour legislation, like that of most English-speaking countries, is shown to be the illogical and unco-ordinated result

of piecemeal measures, dictated often by transient circumstances. To the English student the two features of interest are, first, the complication introduced by the division of powers and functions between the Dominion and the Provincial Governments; and, second, the backward state, compared with England or Australia, of legislation to protect the wage-earner. The Canadian Industrial Disputes Investigation Act, so often held up as a model for this country, is the only measure of which most English politicians have heard; it bears a rather different aspect against a background in which, to quote Dr. Stewart, "as compared with British standards Canadian workers have a very restricted right of association. Trade unions are open to charges of criminal and civil conspiracy and their funds are liable to seizure to satisfy damage actions."

H. CLAY

Sixty Years of Indian Finance. By K. T. SHAH. (P. S. King. Pp. 534. 21*s*.)

THIS work does not, as the title would seem to imply, present a continuous history of Indian finance during the past sixty years. There is no consecutive narrative of the events which have moulded the financial history of the country, nor is it any part of the scheme of the book to show how and under what conditions the existing financial system was evolved. The opening chapter deals with the East India Company's financial organisation, and the reforms effected by Mr. Wilson, India's first Finance Member. This is followed by an analysis and examination of the different heads of public expenditure in India, with tables showing the increases during the period under review. The items are set out in considerable detail and subjected to a close criticism from what may be described as a nationalistic and socialistic point of view. There is no reason to quarrel with the author for adopting these standards of criticism, but it is another matter when the exposition of political views leads to long digressions on subjects which are of administrative rather than financial importance, and whose only connection with public finance is that in a greater or lesser degree they involved the expenditure of public funds. Of some portions of the book it can only be said that finance has been used as a peg on which to hang a polemic against British rule and its officials, though, with some inconsistency, the striking success of the public works carried out by the agency attacked is employed as an argument for the further extension of state management.

Part III of the book gives an interesting account of the principal heads of public revenue. The tables appended illustrate the gradual decline in importance of the older sources of revenue which the Government of India had inherited from its predecessor, viz. land revenue and opium, and their supersession by more modern forms of taxation in the shape of customs and income tax, the profits from railways and irrigation works. The wisdom of the Government's public works policy was at one time the subject of heated controversy, of which an echo may be found in the chapter on railway finance. It is permissible to doubt whether in his severe condemnation of the earlier system of guarantees the author has taken into account sufficiently the low credit of the East India Company, the disfavour into which such railway investments had fallen at the time, and, above all, the entirely new engineering problems to be encountered.

One marked feature of the book is the attempt to divide the financial system of the country into water-tight compartments and to exclude questions of exchange, currency, note issue, as being separate subjects and not essential parts of a whole. The history of Indian finance does not lend itself well to this differentiation, since with the demonetisation of silver by European countries from 1871 onward, the fluctuations of the gold price of silver were such that the Indian budget was at the mercy of exchange, and expenditure and taxation had to be regulated accordingly. From this period to the end of the century currency problems were probably the most vital factor in determining the course of Indian finance. During the post-war period these problems, due in a measure to inflation, were a hardly less disturbing element. Towards the end of the book the author departs from this plan by a chapter on the recommendations of the Hilton-Young Commission. He gives his whole-hearted support to a Gold Standard with a Gold Mint and a Gold Currency and is by no means prepared to accept the findings of the Commission as to the amount of gold that would be required, having regard to the slow development of the banking system of the country, to establish and maintain this standard. Their further objection as to the effect of reducing silver to a token coinage on the silver hoards he seems to dismiss with a query as to whether such hoards in reality exist.

Taken as a whole the book suffers from the defect that it opens up too many questions without exhausting or even fully examining them. The economic problems of a socialistic State are too vast and complex to be adequately considered in what is in the

main an historical study of a country's finance. Before such generalisations as that "the more the State increases its productive enterprise, the more it is in a position to dispense with that relic of barbarism—taxation," can be accepted, they must be examined in the light of the economic tendencies of a modern State, and, until so examined, they form an unsound guide for public finance. In places the financial interest has been largely overshadowed by speculations in the political and social field. The value of the book lies mainly in the historical review of portions of Indian finance and the useful statistical data compiled, rather than in the somewhat bewildering ideas thrown out for amending the existing order of things.

H. R. C. HAILEY

Currency and Prices in India. By C. N. VAKIL, M.A., and S. K. MURANJAN, M.A. (P. S. King & Son. 1927. Pp. xvi + 554. 18*s*.)

Some Aspects of the Indian Currency Problem. By H. L. CHABLANI. (Oxford Book and Stationery Co., Kashmere Gate, Delhi. 1927. Pp. 57. *Rs.* 1.)

Paper Currency in India. By B. B. DAS GUPTA, Ph.D. (Calcutta University. 1927. Pp. xviii + 331.)

THESE three publications are of a very different nature one from another: *Currency and Prices in India* is rather a text-book but is very long. It contains a well-documented history of Indian currency which calls for little comment. This ground has been rather overworked of late and there seems little value in adding to the long list of books already published. The section on Prices is more useful. It contains a very useful account and discussion of Indian index-numbers with a criticism of the methods of compilation. There are sections, more or less lengthy and detailed, giving the price history of the great staples of agriculture and trade. As a reference it will be of considerable value.

Some Aspects of the Indian Currency Problem is a reprint of a series of articles contributed by the author to various papers on the Currency Problem. As such the chapters tend to repeat themselves in places. This, however, is no great drawback. Mr. Chablani has shown great insight and has treated his subject, as he always does, with much lucidity and admirable restraint. If all the present controversy were conducted in the same spirit there would not be such a waste of paper and time,

while at the same time the public interest would be greatly advanced. The author is opposed to stabilising exchange at present, as he prefers a stable price level. In this he is in distinguished company though in disagreement with the Government attitude. While maintaining his own views, which are eminently reasonable, he maintains that the Commission report is, on the whole, a sound piece of work. He rightly emphasises the fact that the ratio problem is not the most important one: that the big question is the establishment of a standard.

Dr. Das Gupta's monograph was first presented as a thesis for the Ph.D. in Calcutta and has since been revised. It is an admirable piece of work and will be of real use, as hitherto there has been very little available on the Indian Paper Currency. The subject is treated very exhaustively, while the arrangement is good. The treatment is largely historical, though the author is capable of excellent analytical work when necessary.

W. S. THATCHER

Die Wirtschaftliche Emanzipation Südamerikas. By DR. AUGUST SKALWEIT. (Jena: Gustav Fischer. 1927. Pp. 27.)

WRITING with first-hand knowledge, gained by investigations made on the spot, the author of this modest little work comes to the conclusion that while a great future awaits South America, the expectations of some of its peoples are pitched too high, and that the course of development in that part of the world will be far less rapid than is commonly supposed. He makes it clear that the great drawback of the South American countries is their relatively small capacity for population under present conditions. In discussing this question Dr. Skalweit declines to take account of abstract potentialities, brushes aside all unsupported hypotheses and speculations, however high their authority, and argues from facts as he sees them. When, in view of the fact that the present density of population ranges from three to five persons to the square kilometre, optimistic prophets talk of a possible augmentation to the extent of hundreds of millions, he asks with cruel pertinence, Where are they to come from and how will they live? For the races now in possession are quite incapable of supplying the increase, and only a tropical stock will ever fill the vast voids. White peoples from temperate climes may, indeed, continue to exploit South America, but they will never populate it. He points out that although in the Argentine, the most favoured of its countries, the natural conditions for a large expansion exist,

the excess of immigration over emigration has greatly declined in recent years, a defective agrarian system being here chiefly at fault. What South America chiefly lacks are a prosperous agrarian population, a large rural middle class, and a big home market. Its people in general, we are told, are very poor—far poorer than Europeans appear to think. "The great mass of the population both in town and country lives in material and cultural impoverishment; from 80 to 85 per cent. of the people are, according to West European ideas, poor." Its fine cities, with their imposing palaces and boulevards, are merely the incongruous façade of a huge poor-house, and whatever opulence exists is that of the foreign elements which live on the country. "The worst of all these (South American) countries is not that the population is so small but that it consumes so little." Modern industry is organised on the basis of "mass production," and a national industry which cannot rely upon a mass consumption must always languish. "There are plenty of instances in South America of products of the home industry which are dearer than the most highly taxed imported articles." Dr. Skalweit comes to the conclusion that if the South American countries hope to prosper they must follow a rational policy of immigration, and as a commencement reform their agrarian laws and systems in the direction of a great division of the land, so offering scope for a denser population and the creation of a large home market. The author has packed many striking facts and a lot of sound commonsense into few pages.

W. H. DAWSON

Die Handelspolitische Bedeutung der deutschen Kolonien. By KARL WEHRSTEDT. (Hildesheim: Franz Borgmeyer, 1926. Pp. 241.)

THE writer of this illuminating book can justly claim fitness for his self-imposed task, and he has discharged it with true German thoroughness. First passing in review Germanic colonising episodes in remote antiquity (and thoughtfully reminding us that "Kolonie" is derived from the Latin *colonia*), he traces the more serious colonial ambitions and experiments of German rulers and merchants in the sixteenth, seventeenth, and eighteenth centuries—rehearsals, so to speak, preparatory to Bismarck's more practical enterprises in this domain during the years 1882–6, when an oversea empire of about a million square miles was acquired by the newly-established Empire. It is the justifiable boast of the German nation that no part of this empire was

acquired by conquest in the old way, but all was either appropriated as no man's land or otherwise obtained, more or less legitimately, by purchase or exchange.

The most important part of the book is that in which the author shows the development which the German colonies underwent before they fell like ripe fruit into the hands of their present holders as loot of war. The 190 or so pages which are devoted to this part of his subject contain a convincing reply to the childish contention of the authors of the Treaty of Versailles that Germany had failed as a colonising Power. In these days of protectionism run mad it is worth while to call to mind the fact that from first to last—in strong contrast to the traditional policy pursued by France and Portugal—Germany, in the treatment of her colonies, followed the policy of the "open door," neither reserving for herself commercial privileges in any of her protectorates nor giving to these preferential treatment in the home market. It is in keeping with the uncontroversial and objective temper shown by the author throughout his treatise that only the barest reference is made to the question of the future of Germany's African patrimony. Yet the author advances arguments and facts which strongly support the view that his country's need for the control of large tropical territories is greater now than ever before, and he leaves the reader in no doubt that the German nation in general, notwithstanding the vociferous protestations of Socialist idealists and Hebrew cosmopolites, has not renounced, and does not intend to renounce, its claim to re-enter the ranks of colonial Powers. Why should it?

W. H. DAWSON

The Account Book of a Kentish Estate, 1616–1704. Edited by ELEANOR C. LODGE. British Academy Series of Records of Social and Economic History. (Oxford University Press. 1927. Pp. xlviii + 532. 31*s*. 6*d*. net.)

THE most important advances made of recent years in the study of English economic history have been due to appreciation of the fact that statutes and blue books and contemporary treatises are insufficient as authorities, and that it is necessary, wherever possible, to get at the actual account books and correspondence of business firms, or, if the effects of economic legislation be our study, at the actual records of administration. The work done by the late George Unwin and his Manchester pupils, in emphasising this need and using such sources of information, stands in

fact, in relation to the work of Cunningham, much as, in the field of institutional history, the work of Maitland and Professor Tout stands to that of Stubbs. In regard to agricultural history, it is true that the methods of the new school were to some extent anticipated long ago by Thorold Rogers' use of mediæval bailiffs accounts; but for the later periods of agricultural history similar material is hard to come by, and the publication of another estate account book belonging to the same century as that of Henry Best [1] is particularly welcome, especially as the seventeenth century is still one of the least known periods in our agricultural annals.

At the same time it must be confessed that the sumptuous volume which is the latest addition to the British Academy's series of Records of Social and Economic History hardly satisfies the expectations which it arouses. As Miss Lodge remarks in her Introduction: " An account book is a tantalising source of information; it hints at so much, but explains so little." And this particular account book is rather a clumsy and unmethodical record. It is little more than a list of payments, interspersed in some of the earlier years with Michaelmas valuations of stock and corn. The payments are mostly farming expenses, including poor rate, tithe, etc., and do not include household expenditure, but irrelevant items occur from time to time—for example, leading and glazing the windows of the house (p. 137), a " riding sute for my wife " (p. 157), and payments made " towards the maintenance of my godson Nicholas Toke at Cambridge " (pp. 138, 140, 143, 148, 154). Many entries are duplicated (for example, pp. 80 and 81-82, pp. 91-92 and 94–95, pp. 104 and 105-106, and pp. 114 and 116), and the editor does not warn us against this source of possible confusion. About sales and receipts we naturally learn nothing from the account book, except, as it were, by accident, as when the dispatch of sheep to Smithfield involved a payment to the man who drove them there (p. 118), and except for some entries of receipts from sales for the years 1616-20 which occur at the reverse end of the MS. (pp. 484–89). All the same the account book yields much interesting information. We get a general picture of large-scale farming—at Michaelmas 1620 the stock amounted to 2230 sheep and 147 cattle, and in the autumn of the following year 83 steers were purchased—and that the farming was careful may be gathered from the

[1] *Rural Economy in Yorkshire in 1641, being the Farming and Account Books of Henry Best.* Surtees Society, 1857. The account book is a miscellaneous note-book of receipts and expenses. It only extends from 1616 to 1645.

payment made for weeding corn, cutting thistles, digging ant-hills, catching moles, digging and carting chalk, spreading dung and marling.[1] Hop-growing appears from 1620 onwards and turnips are mentioned in 1686: clover seeds were bought in 1653 (pp. xxix–xxx). Information about wages is abundant on almost every page, and Miss Lodge has summarised much of it in her Introduction. The amount of piece-work and the variety of operations for which it was used are astonishing. Isolated scraps of interest are not infrequent: *e.g.* we read that in 1617 half an acre of beans was expected to yield 2 "seames" (p. 8),[2] that "to (? two) weavers" were employed in "ripping (? reaping) 6 acers and a halfe" in 1628 (p. 104), that a highway rate was paid as early as 1636 (p. 165). We read a great deal about the payment of poor rates, and though Miss Lodge has extracted some of the more interesting facts which emerge, careful work upon the details would probably yield many more. The high rates suggest that poor relief by no means languished under the Commonwealth in the part of Kent with which the record deals, and a fall in the rates seems to come after the Restoration. Both as regards this subject and many others, statistical analysis of the account book might produce important results. It looks as if agricultural operations were contracted during the rebellion and interregnum, but only a very careful study could show whether this was actually the case and whether it was due to the pressure of taxes (which loom large in the accounts during this period), or whether the appearance of neglect is due merely to less complete account-keeping, to a reduction in the area farmed, or to the substitution of regular labourers paid by the half-year for casual workers and piece-work employment.[3] But any student who attempts to wrest their secrets from these accounts must be on his guard against inaccuracies in the record itself. Occasionally the editor introduces a warning "*sic*," or indicates in a note what has gone wrong. But sometimes she

[1] *E.g.* 1,750 loads of marle were spread in "winterlands" in 1631 (p. 129). The frequent purchase of tar probably indicates care for the sheep, though it would also seem to point to the prevalence of the scab.

[2] The "seame" was apparently 8 bushels, as the Glossary says, for threshing 5 seames 6 bushels of wheat at 8*d.* came to 3*s.* 10*d.* (p. 51); and when Daniell Saudry was "payd for 4 seams & 3 bushels of seed wheat at 3*s.* the bushel," the total came to £5 5*s.* (p. 277); but some other equations occur which do not work out exactly (see p. 13 for example).

[3] I get a general impression from the account that piece work and signs of careful farming increase again after 1664. On the other hand, payments made for "quicke sett" in 1653 suggest enclosing activity under the Commonwealth (p. 236).

has failed to do this. For example, on p. 91 she leaves the entry about "binding 13 acers oak" as it stands, though there can be little doubt that the right reading should be "oats." Again, the payment of £16 8*s*. for poor rate on p. 236, which is left without comment, is shown by the parallel entry on the next page to be a mistake for £1 6*s*. 8*d*. It is a pity too that the index is not as good as it might be. Under "Clover," for example, it only refers us to entries relating to a labourer of that name, and under "Marle" to those which mention a field called Marle! Yet the index is not limited to proper names. The Appendices (pp. 491–6) contain some interesting items, especially about hop-gardens and rotations, culled from some eighteenth-century account books of the estate.

R. LENNARD

NOTES AND MEMORANDA

CREDIT EXPANSION, SAVINGS AND GOLD EXPORT

1. MR. ROBERTSON'S noteworthy contributions to the theory of credit [1] deserve to be developed; and, if developed, throw much light on several sections of economics. One of these contributions concerns the effects of credit expansion on the creation of circulating capital. He holds that most of the real circulating capital that business men need and get hold of is supplied (either directly or through the banking system) by spontaneous saving (spontaneous lacking) by the public; but that a part of it can be supplied, if necessary, out of forced saving (automatic stinting), which the banking system of the country inflicts on the public, through an abnormal expansion of credit, whenever spontaneous savings are not sufficient to meet business men's credit demand. The banking system, in fact, expanding credit, increases the daily stream of money at the business men's disposal; and, empowering them to compete with the main daily stream of money for the daily stream of marketable goods, secures them a part of the latter, depriving the residue of the public of consumption which they would otherwise have enjoyed, and engendering a general rise of prices. Goods, which the public keep from consuming, and are handed over to business men, represent the real capital created thereby by the banking system.

In the whole statement of his theory Mr. Robertson tacitly assumes that the country which expands credit is economically isolated from other countries. This assumption, however, does not thoroughly conform to conditions prevailing in the modern world. Everyone knows that most countries are, nowadays, economically connected with each other. It may therefore be interesting to inquire how far, on this assumption, the above theory holds. The aim of this note is to deal with this point of the problem.

2. Two cases may be considered: (1) where the country concerned is a gold standard one; (2) where it has an inconvertible paper currency. For both cases we shall consider the influence which an abnormal credit expansion exercises on forced saving, either through the ordinary course of international trade

[1] *Banking Policy and the Price Level*, London, 1926.

or through foreign borrowing. And in both cases credit expansion will be supposed to be confined to one country only.

3. So far as international trade is concerned, an abnormal credit expansion in a gold standard country, causing prices to rise, tends to increase imports and to decrease exports of goods, and to drive gold out of the country, until, by its outflow, the same level of prices will be again restored in every country. While this is happening, the stream of goods will increase, in the country concerned, by the full increase of the quantity balance of imports over exports. Obviously, the more goods that are entering from abroad, the less goods the public of the country need to save in order that a given amount of real savings may pass over to business men. Thus the increase of the net imports of goods arising from credit expansion, through the ordinary course of international trade, tends to relieve the public of the country from a part of the burden of the forced saving inflicted on them. But let us see what these imports of goods mean for the countries they are exported from. These countries send to the first one goods in exchange of gold. In so doing they refrain from consuming those goods themselves, that is to say, they save; and the gold they hoard is the material goods in which they embody their savings. Compelling, then, other countries, through credit expansion, to supply her goods against gold, the country concerned acts so as to force other countries to save on her account. As soon as the production, for which the new circulating capital was requested, comes to an end, a reverse process is set in motion. Business men, paying back their borrowings to the banks, allow credit to deflate. Prices deflate also, exports increase, imports decrease and the country gets back the gold she had formerly exported. Getting it back in exchange of other goods, she is, practically, still saving; while other countries, getting goods in exchange of gold, have the power to consume their former savings. That part of the burden of the forced saving, which the first country had previously transferred to other countries, is then shifted back again to her later on. The real savings requisite to meet business men's demand, which were supplied, at the beginning, either by the country concerned or by other countries, will be, at the end, entirely supplied by the former. Instead of concentrating itself in a short space of time, the burden of the whole saving will spread through a long period of time, and will therefore be lighter. Hence the transfer of gold from the country expanding credit to other countries, which, considered from a mere monetary point of view, is to be

thought of as an undesirable event, if considered in connection with collateral problems which arise from it, may be said to be (so far, at least, as it does not shake the soundness of the credit system of the exporting country) a device by which this country transfers, temporarily, to other countries a part of the burden of the forced saving the bank system imposes on her, causing thereby that burden to distribute itself in time more evenly, and to be lighter than it would otherwise have been.

4. As far as foreign borrowing is concerned, we know that it tends, like any other kind of borrowing, to postpone, for the borrower, the burden of saving. When the borrower is a country, that happens in the following way. Through a well-known process, borrowing tends to increase the imports of the borrowing country. Thus, whilst borrowing is going on, the stream of marketable goods available to her tends to increase; relieving thereby her public from a part of the burden of the forced saving inflicted on them, and transferring this burden to the lending countries. It must be observed, however, that in so far as the former country exports gold, she is imposing on other countries, as already seen, forced saving, whilst in so far as she is borrowing from them she is taking out of them spontaneous savings. When, later on, loans are being paid back and the reverse process is setting in, the stream of goods will decrease, throwing on the public's shoulders the part of the burden they had been previously relieved from. In this respect, then, borrowing works just as gold export. But there is a difference. Gold export does not involve the payment of any interest. Consequently, the country from which gold was exported has to export later on, in order to get it back again, goods of the same value as those she had formerly imported. Borrowing, on the other hand, involves the payment of interest; and the borrowing country, in order to pay back her loans, has to export goods of a greater value than she had previously imported. It follows that export of gold, as a means of postponing part of the burden of forced saving, is preferable to borrowing; and that, as far as it is possible, it will be resorted to. But there is a limit to it. Exporting gold, the country restricts the basis of her credit system, and increases the chances of a bank collapse. There is a minimum ratio of gold reserves to liabilities of the banking system, as a whole, under which gold reserves must not go. So long as the actual ratio is higher than the minimum one, the country will find it convenient to export gold; and she will not borrow. But as soon as that minimum ratio is reached, she will stop gold export,

and will resort to loans. Practically that happens through the action of the central bank, which, raising when necessary the rate of discount, stops the gold outflow and calls into play, in its stead, borrowing. From what has been said so far we see, then, that in a gold standard country, economically connected with other countries, the stream of the real circulating capital which the banking system creates, through an abnormal credit expansion whenever spontaneous savings fail to do so, is supplied, so long as credit inflation lasts, partially by the public of the country, through forced saving, and partially by other countries, either through gold export, that is to say, through forced saving, or through lending, that is to say, through spontaneous saving.[1] Subsequently, when internal credit is being deflated, the country will either reimport her gold or pay back her foreign loans. By so doing she will increase her exports of goods and diminish the size of the stream of goods available to her public, compelling them to refrain, later on, from consumption, and causing thereby the *whole* circulating capital to be ultimately supplied by them out of forced saving. But by so doing she is minimising, on the whole, the burden thereof.

5. Let us turn now to an inconvertible paper country. In such a country, if the banking system, in order to meet business men's demand, expands credit, prices will rise, as in a gold standard country. But, as the national currency is not convertible into gold, foreign exchanges will also rise. Three cases, so far as the influence of the ordinary course of international trade is concerned, are possible and have to be considered: (1) when the rise of internal prices goes ahead of that of foreign exchanges; (2) when it keeps level with it; (3) when it lags behind it.

In the first case, internal prices will be, provisionally, higher than external ones; imports will increase, exports decrease, the stream of goods at the country's disposal will be greater; and the net result will be an increase of the real capital, coming, even in this case, partly from internal forced saving and partly from abroad. A reverse process, similar to the one explained above, will come into play later on. But in the meanwhile the abnormal credit expansion in the country concerned causes the burden of the forced saving, arising from it, to be partially shifted on to other countries. And that occurs through a change in the real ratio of international interchange.

[1] We leave here out of account less important sources of supply. See for them, Pigou, *Industrial Fluctuations*, London, 1927, pp. 105–13.

In the second case (the rise of internal prices being supposed to keep pace with the rise of foreign exchanges) there will be no change, neither in the real ratio of international interchange nor in the volume of imports and exports; and the burden of the forced saving will be entirely borne from the outset, so far as it depends on the ordinary course of international trade, by national consumers, just as if the country had no economic connections with other countries.

In the third case (internal prices being supposed to be lagging behind foreign exchanges) the real ratio of international interchange will move, at first, against the country. Exports will increase, imports decrease, the stream of available commodities will decrease, and the burden of the forced saving will be, for national consumers, greater, at first, than if the country did not trade at all. When, later on, the reverse process is set in motion, there will be a net increase of imports, and thereby an increase of the stream of goods at the country's disposal; which, upsetting the former situation, will cause that burden to be lighter than it would otherwise have been. In this case, therefore, the existence of trading connections with other countries, instead of diminishing the unevenness of the distribution in time of that burden, tends to increase it, and to increase, thereby, on balance, the burden of the public. The experience of the last decade has taught us that the case that practically occurs is the last one. Thence we infer that the expansion of banking credit in an inconvertible paper country, having economic connections with other countries, works generally (so far as it depends on international trade) less satisfactorily than in an isolated country as a creator of real circulating capital. It follows that a country in the above conditions would have to resort to foreign loans more extensively than a gold standard one in order that her public may be partially relieved from the burden of forced saving. Practically, however, this is unlikely to occur, as countries with a stabilised money do not generally lend willingly and largely to countries with an unstabilised one.[1] Hence in a paper currency country, economically connected with other countries, credit expansion is, generally, less efficient than in an isolated country, or in a gold standard one, as a creator of real circulating capital; and a greater credit expansion is, consequently, necessary in order that a given amount of real savings should, in the time requested, pass over to business men. We have here an instance of the drawbacks of paper currency.

[1] Keynes, *A Tract on Monetary Reform*, London, 1923, p. 109.

6. Summarising the results of this note we may, then, conclude :

(1) That in a gold standard country, economically connected with other countries, the burden of a given amount of forced real savings, arising from an abnormal credit expansion, is, for national consumers, lighter than if the country were isolated, part of that burden being, provisionally, shifted over to other countries, through a temporary gold export and through foreign borrowing;

(2) That in an inconvertible paper country, economically connected with other countries, that burden is, presumably, nearly always greater than in an isolated country, the unevenness of its distribution in time being, generally, increased by trade connections, and its increase being unlikely to be always entirely cancelled by foreign borrowing.

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PRODUCTIVITY THEORIES OF THE TRADE CYCLE

THE view that commercial crises, periods of recurrent unemployment and, in short, the various phenomena which go to make up what is now known as the trade cycle, are related in some way or other to the increasing productivity of labour brought about by modern methods of manufacture and distribution is not, of course, a new idea in economics. The germs of it are doubtless to be found in the writings of Malthus and Sismondi. Rodbertus seems to have been responsible for its introduction into socialistic literature, where it has figured largely ever since.

Unfortunately this class of theory has usually been expressed in forms unacceptable to the majority of economists. Thus the theories of Malthus and Sismondi contained assumptions as to the possibility of there being a general over-production of commodities, that is to say, a supply of all kinds of goods in excess of the demand. These assumptions were strongly contested at the time by J. B. Say and the elder Mill, and later by J. S. Mill, the latter of whom roundly asserted that the theory of general over-production implies an absurdity (*Principles of Political Economy*, Book III., Chap. XIV., Section 3). This declaration represented the orthodox position in Mill's time and, as regards the original theory, it is probably the orthodox position to-day, despite some apparent indications to the contrary (*e.g.* Professor

L. V. Birck, "Theories of Over-Production," ECONOMIC JOURNAL, March 1927, p. 21: "Everybody knows that a relative general glut reappears every time credit collapses, and that it is a natural and regularly reappearing phenomenon of deflation." See also Mr. G. B. Dibblee. *The Laws of Supply and Demand*, 1912, chapter on Over-Production).

Apart from the postulate of over-production, the theories of the trade cycle favoured by socialists have been otherwise objectionable, in that they have tended to give rise to the impression that the spread of labour-saving devices must necessarily cause corresponding unemployment, at least under capitalistic conditions—although some guild socialists and others might wave even this last qualification. In its simplest form, the usual reply to this is, (*a*) that the use of machinery frequently lowers prices and stimulates consumption to such an extent that the demand for labour in the affected industry is fully maintained, and (*b*) that where this is not the case, the displaced labourers find employment in other industries. In a competitive system, however, these theses are true only in so far as competition is perfect and capital and labour are freely mobile. In general none of these conditions are fulfilled, and so industrial improvement must be held to be responsible for at least a certain amount of unemployment.

Most economic text-books now recognise that owing to the imperfect mobility of capital and of labour (more especially of the latter), temporary disturbances of the labour market may ensue on industrial reorganisations and improvements in technique. This fact has also been recognised in many countries by the Legislature in the provision of labour exchanges, the object of which is to increase the mobility of labour by rendering it easier for the unemployed person to find a vacancy. The effects of imperfect competition *per se* have not, however, been so well studied. Reflection on this matter finally led to the publication in the ECONOMIC JOURNAL of June 1926, of the writer's article on "A Possible Cause of Cyclical Unemployment." Here the thesis was laid down and partially developed that industrial competition—*e.g.* the competition between producer and producer—is of variable incidence in point of time, and that this intrinsic variable incidence, with or by repercussions upon credit, determines the phenomenon of the trade cycle. (It is an interesting question, by the way, whether this variability is not really associated with the relative immobility of much fixed capital, *i.e.* as contrasted with circulating capital. Increase of the former

proceeds not only gradually but also in many cases very discontinuously. Most patently is this the case when the capital increase arises through the formation of new businesses, when large blocks or quanta of fixed capital suddenly appear and begin to function. The possibilities for cyclical disturbance here are obvious.) Actually, the trade cycle is regarded essentially as a profit cycle, with a modifying but dependent credit cycle superimposed. Along these lines, then, we reach a productivity theory of the trade cycle which, while it may or may not be true, would at least appear to be free from the *prima facie* objections that we have seen attached to so many other theories of this nature.

Curiously enough, in the last six pages of his article on "Theories of Over-Production," which appeared in the ECONOMIC JOURNAL of March last, Professor L. V. Birck, of the University of Copenhagen, has propounded yet another productivity theory of cyclical fluctuations in industry. The differences between the two theories will be best understood by setting out point by point the course of a trade cycle according to each theory. Thus:

The Writer's Theory

1. Industrial improvements (technical and administrative) increase the productivity of labour.
2. Owing to the temporarily imperfect working of competition, the increase in productivity is not accompanied by an adequate stimulation of consumption through lowered prices.
3. Nevertheless the profitable condition of trade, by increasing the values of securities, provokes an expansion of credit which masks or entirely staves off any threatened fall in consumption.
4. Depression is signalised by increase of competition and collapse of credit, resulting in destruction of purchasing power and rapid fall in prices; until a new production-consumption equilibrium is established at a lower real price-level in the improving industries.

Professor Birck's Theory

1. Industrial improvements increase the productivity of labour.
2. The introduction of said improvements throughout industry would, however, entail a larger capital expenditure than is provided for by the current rate of saving.
3. Workers are consequently thrown out of employment until

sufficient profit has been capitalised and invested in improvements to keep all the workers fully employed.

Professor Birck's theory, it will be seen, postulates *under-saving*, associated with improving technique, as the chief cause of unemployment. In this it is directly contrary to Mr. J. A. Hobson's theory (vide *Economics of Unemployment*, 1922), wherein recurrent *over-saving* is postulated.

By contrast with the above a socialist theory may be set out:

Socialist Theory

1. Industrial improvements increase the productivity of labour.
2. Owing to the monopolising power of the capitalists, the increase in productivity is not accompanied by an adequate increase in the workers' consumption.
3. The capitalists being unable to consume all the surplus goods, a condition of over-production of goods and under-employment of labour is established, production being curtailed until the surfeit of goods has disappeared or been consumed.

This is practically the view expressed by Mr. Philip Snowden in his *Labour and the New World*, 1921, pp. 188–9. It is, however, common to socialistic literature. Mr. Hobson's theory would appear to be very similar, the only important differences being those of emphasis. Incidentally the writer's own theory also resembles the socialist view in tracing the genesis of the trade cycle to an increase in capitalists' profits. But whereas the writer attributes this increase to a purely temporary slackening of the forces of competition, resulting in an unstable prices-level for certain classes of commodities, the socialists attribute it to the *permanently superior* bargaining power of the capitalists as against the wage-earners. Otherwise the two theories have nothing in common.

As to other theories of the cycle, it is sufficient just to mention here those of the various would-be currency reformers who base their case on an alleged failure of purchasing power, "tied to gold," to keep pace with the increasing flow of goods brought to market as a result of the intensive methods of modern industry. The so-called flaw in the price system is held to limit the market, and to cause unemployment and trade losses, liabilities from which an inconvertible paper currency is designed to free us.

In view of the very recent introduction of the writer's and

of Professor Birck's theories, the lack of data, and the complex issues involved, serious criticism or discussion of them at this stage can hardly profitably be attempted. Nevertheless the almost simultaneous publication of two apparently new and quite distinct productivity theories of the trade cycle may well prove to be the herald of a revival in this class of theory which will gravely affect the standing of the purely monetary theories. Whether this should prove to be the case or not, the facts emphasise the great need for caution to avoid arriving at a premature solution.

JAMES SOUTHWORTH

THE MOBILITY OF LABOUR IN THE COTTON INDUSTRY

1. LITTLE attention has been paid, as yet, to the effects of the depression in the cotton industry on the operatives themselves. Since 1921 production has never been greater than about 80 per cent. of capacity, so that under-employment has been great and continuous. The lessened demand for labour, revealing itself in loss of earnings, would, it seems, compel adaptation on the part of labour to the new situation. It comes, then, as a surprise to learn from the Ministry of Labour [1] that the number of insured persons in the industry is still larger than in 1923, although there has been a slight decrease between 1926–27. Following on this, a recent official investigation discloses the fact that between 1920 and 1925 the percentage of outward transfers from the cotton industry has been less than from any other industry excepting coal.[2] It was to confirm the broad impression thus created of the immobility of labour in the present depression that further evidence was sought as to the internal movement within the industry itself. It is now clearly established that the depression is highly localised. Some towns, especially in the Oldham district, have suffered badly, whilst others have remained almost unaffected. In July 1927, at the annual collection of Unemployment Insurance cards, an attempt was made to discover whether there had been any movement of labour from the depressed to the prosperous sections of the industry.

2. When, in 1920, the then existing scheme of National Unemployment Insurance was replaced by a wider and more comprehensive system, the cards issued to individuals insured bore a

[1] *Ministry of Labour Gazette*, November 1927.

[2] Report on an Investigation into the Employment and Insurance History of a Sample of Insured Persons, 1927.

number representing their office of origin. Cards issued since that date to entrants into insurance similarly have been numbered to reveal the Employment Exchange from which each individual drew his card originally. Despite annual renewals of each card and possible changes in the occupations and industries of the holders of cards, those original numbers representing the geographical source have been retained. Each year, in July, insurance cards are collected, the old cards being lodged at Kew and the renewals redistributed. The collection of the old cards is carried through by the local Employment Exchanges, each of which may collect directly from the individuals served by that Exchange or from firms within its own sphere of operation. The result is that, at the annual collection in July, each Employment Exchange finds among the group of cards it has prepared for dispatch to Kew many bearing an origin number which differs from its own. The reason is, of course, that insured persons have moved from one part of the country to another, either in the same or different industries, and the retention by the Ministry of Labour of the old origin number reveals this movement.

This provides a method of measuring the movement of labour between the years 1920 and 1927, since at the annual July collection of old cards each Employment Exchange will have a number of "foreign" cards of persons who, at some time since 1920, have moved into the area covered by that particular Exchange from the area covered by the Employment Exchange from which the card was originally drawn.

Through the kindness of the officials of the North-western Division of the Ministry of Labour Employment and Insurance Department, it has been possible to collect, in respect of all cards in the industrial group VA—*i.e.* the group covering cotton manufacture—and for each Exchange in Lancashire where the cotton industry is important, details of the number of "foreign" cards lodged during the transfer of cards which took place in July 1927. Since the holders of these "foreign" cards may have moved either from another industry into cotton, or from some part of the cotton industry other than that in which they found themselves in July 1927, this information should give a fair index of the extent to which labour has either moved from some outside industry into the cotton industry, or has moved from one section of the cotton industry to another between the years 1920–27.

Such movement of labour was found to be very slight. In the majority of Exchanges the percentage of "foreign" cards to

the total cards lodged was less than 5 per cent., and in some cases as low as 1 or 2 per cent. Taking forty-five Exchanges together, men and women, the figure was 2·8 per cent. As might be expected, the movement of women workers was less than that of men. Only in the case of two Exchanges do the "foreign" card percentages for women exceed those for men. The percentage for men was 3·1, and that for women 2·3. The proportion of "foreign" cards was lower in those sections of the industry which have felt the brunt of the depression, such as Oldham (1·6 per cent. for men, and 0·7 per cent. for women) or Royton (1·8 per cent. and 1·0 per cent.), than in those areas where fine spinning predominates and where unemployment is slight, such as Bolton (3·9 per cent. and 3·1 per cent.). On the weaving side the same difference is still noticeable, though less marked. Thus Burnley is below the average (2·9 per cent. and 1·8 per cent.), whilst Preston—engaged in comparatively high-class work—is above it (7·3 per cent. and 5·4 per cent.).

There appears to have been no movement of labour between areas in the Lancashire cotton industry which have been comparatively prosperous since 1920 and those which have been constantly depressed. The fine spinning and weaving areas have not, to any appreciable extent, drawn labour from the coarse-spinning towns. Accrington appears to have drawn labour from Blackburn and Burnley, but Blackburn and Burnley, in turn, have taken labour from Accrington. The movement within the industry appears not as a broad movement produced by a common economic stimulus, but as the inexplicable variety of individual action prompted by purely personal factors.

3. The evidence suggests, therefore, that the problem of the surplus labour in the industry has yet to be dealt with. The labour in the cotton industry is naturally immobile, due to the high proportion of women workers and the close personal relation which still exists between employers and employees. There seems little doubt that this immobility has been accentuated by the general system of short-time working which has been steadily adhered to since 1921, combined with the practice of organising short-time working in a way which has enabled the worker to draw his weekly income partly from the employer and partly from the Unemployment Insurance fund.

J. Jewkes
H. Campion

Unemployment in the Madras Presidency

It was to be expected that if any lack of employment should be experienced in India, the industrial sections that would feel it first would be Bengal with its extensive jute mills, and Bombay with its large cotton interests. They felt the pressure several years ago; committees investigated the situation and made recommendations. It was not until about two and a half years ago that the problem became acute in Madras, when the attention of the Legislative Council was called to the matter, and Government appointed a strong committee representative of official and business interests to consider the question carefully and make recommendations. The present writer was a member of that Government Unemployment Committee, which contained prominent business men, educationalists and a large number of Indian public men; Sir George Paddison, the Commissioner of Labour, Madras Government, was the President. The terms of reference were broad, allowing adequate freedom to the Committee in attacking the problem. The Committee was asked to investigate the question of unemployment among the "educated middle classes" in the Madras Presidency, and to submit its report to Government. The method of procedure adopted by the Committee was to draw up a questionnaire and submit it to a large number of people in the Presidency, asking them to give whatever information and suggestions they might have on the problem. Then a number of people were called for personal interviews and the giving of oral evidence to the Committee. On the basis of this evidence, both written and oral, the Committee drafted its report, which has now gone to the Press, and later will be fully considered in the Legislative Council. The Committee was at work for about a year during 1926 and 1927.

With a problem so vast as the question of unemployment in a population of forty-five millions some limitation must be set to the investigation; that limitation of the field was set by including only the "educated middle classes"—that is, students of the High School, Intermediate College and B.A. graduate grade, who are at the present time the class most affected by unemployment. It was to help this class of the community that the Committee was set to work.

The first thing that the Committee tried to find out was the extent of unemployment. Employers reported that they were constantly besieged with young men seeking a clerical job. In

order to make sure on this point, the Committee asked the Superintending Engineer, Mettur Irrigation Project, to insert a test advertisement in the newspapers for a clerk's position, offering a monthly wage of Rs. 35, or about 13 shillings a week. The result was that 666 applications were received; of these, 30 were from graduates, 61 from intermediates, 194 came from High School students, and 381 from those who had not passed through a High School, and therefore were not eligible to take a University course. That means that B.A. graduates were willing to take a position requiring no higher qualifications than those possessed by a person not even having a High School training on a salary of thirteen shillings a week. A commercial firm in Madras advertised in a similar way for a clerk on the same rate of pay, and received 787 applications. That gave the Committee a pretty good idea of the extent of unemployment among this class of people. It suggested that the supply of this class of labour was greatly in excess of the demand.

Another line followed up was to ascertain the number of clerical and professional posts to be filled up every year, and also the number of young men leaving school and college each year, who would be competing for those positions. It was ascertained, on an average being taken of the last five years, that 14,000 educated or at least partially educated young men of the middle classes are thrown on the clerical labour market every year, but the number of vacancies to be filled for that class of service is only 7,000 per year. So that the problem resolves itself into this: the proportion of educated young men in South India seeking employment every year to the demand for their services is approximately speaking two to one. Another distressing fact is that the openings for clerical work are relatively on the decrease, while the number of people qualified to fill them is decidedly on the increase. For instance, according to the last Census Report there has been a decrease of 11½ per cent. of persons employed in Government service, of 21 per cent. in Municipal and Local Board service, and of 25 per cent. in the professions. On the other hand, the statistics furnished by the Director of Public Instruction for the decade 1915 to 1925 show that the number of graduates has more than doubled, the number of intermediates has trebled, and the number of those completing the High School course is 2½ times more than the number in 1915. To put it in another way: taking the average of the past three years, it is found that the approximate percentage of men permanently employed to the supply of such men is as follows:

(1)	Graduates in Arts . . .	28 per cent.
(2)	Intermediates	16 ,,
(3)	Completed High School . .	12 ,,
(4)	Non-completed High School .	8 ,,

These figures refer only to Government service, but they are indicative of the situation as a whole.

From these and other similar facts the Committee found that there is very serious unemployment among the educated middle class of young men in the Madras Presidency, and that this unemployment tends to increase each year in proportion to the increase of students taking the course in secondary education. It was apparent that the extent of unemployment among those having only a general education was greater than among those who had some professional training, and the greater the degree of professional qualifications the more was such a person insured against the chances of unemployment. There is very little middle-class unemployment in the occupations of agriculture and industry, including handicrafts, because the demand there is greater than the supply of those willing to engage in this kind of work. On the other hand, the professions of law and teaching are greatly overcrowded. In the medical profession there would be greater scope for employment and less chance of unemployment, if the practitioners would distribute themselves more evenly over the Presidency, instead of concentrating in the cities and larger towns. There is some unemployment among those having training in engineering, but as the country advances these ought to be able to find work. Unemployment in business firms, or among those trained for a commercial life, is very serious at present, but here again this situation should be bettered as trade revives and the country develops.

The Madras Presidency, like all other countries, has suffered from the reaction after the war. Large numbers of men employed in war-clerical work returned to swell the ranks of the more or less educated unemployed. Government was forced to adopt a policy of retrenchment because of the shortness of money occasioned chiefly by the large contribution which Madras was called upon to make to the Central Government of India. This condition affected business firms, of course, and many of them, instead of giving employment to new men, had to dismiss many of their old and experienced staff. There was a serious loss of markets which reduced production and consequently employment. There was a large increase in credit which drove prices up, and the disloca-

tion of the exchange added to the general unfortunate situation. These are more or less general causes of unemployment which were experienced all over the world. But there are causes distinctly peculiar to South India, and it is of them that I wish especially to speak.

The extent of unemployment among the educated middle classes in the Madras Presidency is due to two chief causes: in the first place, the very widely held idea throughout South India that the real object and purpose of an education is to secure either a Government position or the right to plead in the law courts; and secondly, that the pursuit of agriculture, which has to support about 70 per cent. of the population, offers no career for an educated young man. The repercussion of these two erroneous ideas has brought about a serious state of unemployment, which is having a bad effect upon the economic life of the whole country.

We shall have to go back for nearly a hundred years to understand the history of that first cause. English education was allowed in India by the East India Company for the purpose of supplying a sufficient number of trained clerks and other workers for Government service; "to provide a regular supply of qualified Hindu and Mohammedan law officers for the judicial administration," and also "for the introduction and promotion of a knowledge of the sciences among the inhabitants." [1] It was this commercial value of an English education which made the acquiring of English so attractive; it was the golden key which opened to bright young men a sure "berth" in the Government service, carrying with it good pay, congenial clerical work and a pension for old age. No wonder, then, that poor parents, illiterate themselves in many cases, have sacrificed their all and gone heavily in debt to give their boys an English education. That point of view and practice have continued down to the present day.

A law course and a degree in law have had and still have a great attraction for Indian young men. The prizes to be won are considerable, and some of the brightest and cleverest lawyers have become very wealthy through an extensive practice, but these honours and successes come only to the few. There are thousands of lawyers who are not able to earn a living from their practice, and yet every year scores of young men enrol in the Law College in Madras. A pleader's licence is the ticket of admission to an honourable and exclusive caste which allows to its membership

[1] Sir Charles Trevelyan's *The Education of the People of India* (1838).

a considerable amount of prestige. Many young men say, when asked why they try a profession which is so obviously over-supplied, that they want the law training, and "anyhow what else can we do"!

If Government service and the law are overrated, it is equally true that agriculture is sadly underrated as a possible career for an educated young man. The desire to possess land is very keen throughout India, but the joy and independence of cultivating one's own land does not appeal to the average owner. More and more is it the practice for the cultivating owner to be replaced by the absentee owner who leases his land on some sharing system or for a cash rental, and then ceases to take an interest in his land except to collect the rent. The idea that a sufficiently large farm, with the capital which would have been spent on a university education, might make a career for his son and be at the same time a paying business concern does not seem to enter the head of either the average father or the son. The popular opinion in India about agriculture is that it is possible to follow it to make a living, but not to make money. One reason for this attitude is the vicious and uneconomic practice of minute subdivision of land holdings. Until larger holdings are possible by a change in the present joint-family system one cannot see much inducement to young men with some education to go back to the land for the purpose of cultivating their land to make money by up-to-date farming.

There are other reasons as well for this decided distaste for agriculture, such as the townward drift, which is very real in modern India. Growing towns are providing all kinds of attractions to young men to lure them from the country. The life of a clerk is considered more dignified than that of a farmer, and consequently the ordinary educated man prefers a mere pittance in a town to the possibility of success on his own farm. The way South India is economically constituted at present means that it must continue for a long time to come to give employment to about 70 per cent. of its population on the land. Otherwise, there will be a constant over-supply of the market in other branches of labour, such as Government service, clerical positions, and the professions, which will result in a continual unemployment problem. Caste figures in the case to some extent because it renders labour immobile; caste restrictions are untenable in the economics of a modern state. Much can also be said against the lack of variety in the Madras educational system. For the purpose which called the system into being it has served the country

well, but the needs of the country have long since outgrown its educational system. The country to-day wants more than a merely literary trained man, capable of doing the work of a clerk, a writer, or an ordinary teacher. India needs to-day young men with a technological training, who will have imagination and initiative enough to strike out for themselves, to make a career for themselves outside of the beaten track. The Committee consider that the failure of parents and educationists, as well as Government, to read the signs of the times in determining the careers of young men by something like vocational guidance is one of the main causes of unemployment.

The Committee have not been able to find out and recommend a magical solution of the problem that will at once abolish unemployment and give every young man in the Presidency a job which is permanent and to his liking. No radical changes have been suggested, but the Committee have been able to diagnose the trouble and outline a policy for the future which if persisted in will in time greatly relieve the present unemployment situation. The first thing to do is to remove from Indian thinking the two erroneous ideas that education is solely for the purpose of getting into Government service, and that the pursuit of agriculture is below the dignity of an educated man. These two ideas must be abolished, root and branch, by an educational campaign in the schools, by Press propaganda, and by bringing home to parents and guardians the stern fact that the supply seeking clerical jobs is far in excess of the demand.

To try and develop a back-to-the-land movement it was suggested to the Committee that the establishment of farm colonies for the educated unemployed might not only reduce unemployment, but might induce the middle classes to retain their sons in agriculture. It was also suggested that some leading ryots should visit foreign countries and see how farming is carried on in other countries. In this connection, however, it was voted to recommend to Government that small farms of at present uncultivated lands be made available for middle-class educated young men who possess no lands of their own, on long lease, with the option of buying, and that loans and other facilities for agricultural purposes be made to such agriculturists for the purpose of developing their holdings. A plea was made by the Committee for the extension of primary education, especially along the general lines of agricultural middle schools. The state of illiteracy is appalling in the country districts. Of 3,784,000 boys of school age (that is, from six to eleven years of age), 1,452,000 were

attending elementary schools on the 1st of April, 1926. This leaves about 2,332,000 children, or 62 per cent. of the children of school age, who are not attending any school at all. The great need is therefore apparent for starting a large number of rural schools to train children for their village life. These rural schools should have small farms attached to them, and the teachers should not be above handling the plough themselves. Training institutions themselves should aim at the following results in the teachers undergoing training:

(1) leadership;
(2) live interest in village school problems and in the progress of their students;
(3) special knowledge of agricultural practice; and
(4) teaching capacity, the ability to teach being more important than formal scholarship.

The Committee in its conclusion states that the problem of middle-class unemployment is one not capable of immediate solution. It is fully conscious that it has suggested no drastic remedies. All it can hope is that the result of its labours will be that the people as a whole will realise the extent of the evil and the necessity for a change. The remedying of the situation lies in the hands of the people themselves. Unemployment in whatever section of society is a complex evil which arises from many causes, social, economic, political, and even international. Being such a widespread and deep-rooted evil it will take time, and perhaps a long time, to remove it. But if there is a desire on the part of the people to alter the existing unfortunate state of things, so as to create more demand for trained ability, and if a larger number of men with ideas and who are not afraid to work will come forward to assist in the economic development of the country, the Committee is confident that in its recommendations pointing to a change in educational ideals and a readjustment of educational programmes to meet practical needs, and to a reversion to the land as the chief producer of wealth, the people, and especially the unemployed middle classes, will find the way to a happier future. What South India needs is a change in its angle of vision in reference to education and service.

Summary of the Findings

The following is a summary of the findings of the Committee which will be submitted to the Legislative Council:

1. There is unemployment among graduates who possess no

professional qualifications; more among Intermediates and High School students; and most of all among persons who have not completed or taken a High School course.

2. While there is need for a great spread of education among the people, the demand for teachers is limited, and so there is unemployment among teachers, more among untrained than among trained.

3. While there is no actual unemployment among lawyers, there is a keen struggle at the bar, some of the junior vakils not being able to obtain a livelihood.

4. In the case of the medical profession, it is overcrowded in the cities and larger towns, but there is ample room for many more medical men in the villages and smaller towns.

5. While there has been some unemployment among engineers owing to the retrenchment policy of Government, the relaxation of that policy and the starting of new works and enterprises has greatly lessened unemployment among engineers in general.

6. Men trained in agricultural colleges have usually sought a post in the Agricultural Department of Government, and, when that was not available to them, have gone into some other work. There is no tendency to use their knowledge and experience on their own lands, for farming is not considered a suitable career for an educated man.

7. There is little or practically no unemployment among those trained in handicrafts and industries, or those who possess a railway experience, or have accountancy and banking training.

8. The prevalent idea that the main object of an education is to enter Government service, or the profession of law or teaching, is the chief cause of unemployment.

9. Parents do not recognise that Government service and the law should afford a career only for the more brilliant of their sons; the other boys should be trained for some other activity in life. This is due partly to the rigidity of the present educational system.

10. The less bright boys should be trained along more practical lines, such as agricultural, technical, industrial or commercial, more suited to their capacity.

11. Social causes, such as caste, early marriage and the joint-family system, in preventing the mobility of labour cause unemployment in particular communities and occupations.

12. The principal remedy for the present state of unemployment should be the diversion of some of the educated middle classes, especially those who own or occupy land, to agriculture.

13. Public opinion should be educated to realise the disagreeable fact that the present supply of persons qualified for Government posts and in the legal profession greatly exceeds the demand.

14. Larger facilities should be given for education of a practical nature, and especially for agriculture. The Committee hopes that zamindars will encourage specialists in agriculture to a much greater degree.

15. The secondary school course should be reorganised when necessary to suit the requirements of agricultural, technical and industrial schools and higher technological institutions.

16. Extension of primary education and the necessary training of the requisite number of teachers and the improvement of their prospects is also a remedy for unemployment, so far as that occupation is concerned.

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Note on the British Balance of Trade.

Since the publication of my article on "The British Balance of Trade, 1925-27," which appeared in the Economic Journal for December, 1927, p. 551, the definitive figures for 1927 have been published by the Board of Trade. The apparent excess of new foreign capital issues in 1927 over the net surplus on income account comes out at £43,000,000, instead of £61,000,000 as in my provisional estimate. This modification does not materially affect my argument as to what had been happening during the three years 1925-27. The final estimates of the Board of Trade are shown in detail below; it will be seen that they have increased their estimate of the net shipping income by £20,000,000.

The following table is set out (with the 1927 figures brought up-to-date) in the same form as in "Britain's Industrial Future," p. 29.[1] The figures for the years prior to 1927 only differ from those in my previous article in that certain small subsequent corrections by the Board of Trade for the years 1922 and 1923 are now allowed for.

[1] There is a slip (corrected below) in the table as there published, the Bank of France repayments being reckoned an addition to, instead of as a subtraction from, net foreign investment.

(In millions of £'s.)

	1913.	1922.	1923.	1924.	1925.	1926.	1927.[2]
I. Income Account.							
Estimated Net Income from Overseas Investments	210	175[1]	200[1]	220	250	270	270
Estimated Net National Shipping Income . .	94	133[1]	133[1]	140	124	120	140
Estimated Receipts from Short Interest and Commissions . . .	25	40[1]	50[1]	60	60	60	63
Estimated Receipts from other Services . .	10	12[1]	15[1]	15	15	15	15
Total . . .	339	360[1]	398[1]	435	449	465	488
Deduct Estimated Excess of Government Payments made Overseas . .	- -	?	25	25	11	—	-
Net Non-Merchandise Surplus	339	360[1]	373[1]	410	438	465	488
Net Merchandise Deficiency (*i.e.* excess of Imports of goods and bullion over Exports) . . .	158	171	195	324	384	477	392
Net surplus on Income account	181	189	178	86	54	− 12	96
II. Capital Account.							
New Foreign Issues of Capital in London .	+198	+135	+136	+134	+ 88	+112	+139
Bank of France repayments to Bank of England[3]	—	− 5	− 5	− 5	− 6	− 7	− 37
Assumed Increase (+) or Decrease (−) of other Capital Items required to Balance the Account .	17	+ 59	+ 47	− 43	− 28	−117	− 6
Total of Capital Account .	+181	+189	+178	+ 86	+ 54	− 12	+ 96

[1] Board of Trade original estimates (*Board of Trade Journal*, January 31, 1924, p. 152) revised to harmonise with the official revision of their original estimates for 1924 and 1925.
[2] Non-merchandise surplus assumed to be the same as in 1926.
[3] Estimates.

Compiled from the Board of Trade Journal, January 31, 1924, p. 152, January 27, 1927, p. 93, February 2, 1928; *Midland Bank Review*.

J. M. KEYNES

Official Papers

Reports on the Present Position and Tendencies of the Industrial Arts as indicated at the International Exhibition of Modern Decorative and Industrial Arts, Paris, 1925. (Department of Overseas Trade. Pp. 208. 7*s*. 6*d*.)

This remarkably attractive volume, with numerous illustrations of prominent exhibits in each Department, is offered to the reader at a fraction of its cost of production. The object of the Report is to obtain " as true a picture as possible of the existing condition of the principal branches of industrial art production in the chief countries in the world," of the influences at work and of the direction towards which they are tending. The ground covered includes Architecture, Mural Decoration, Furniture, Textiles, Metal Work, Pottery and Glass, Printed Books, Illustration and Posters, Theatrical Art, Garden Art and the Art of Lighting. Each group of exhibits was assigned to an expert who was left untrammelled in the expression of his opinions, while the Chairman of the Editorial Committee summarised and co-ordinated their criticisms in an Introductory Survey of some thirty pages.

The Exhibition was intended to display examples of the contemporary art work of all nations. Its scope was restricted by only two conditions: the exhibits were to " fulfil a practical need," and at the same time to " show a modern inspiration and a real originality." Twenty-two countries were represented, including all the important European States with the exception of Germany and Norway. America was entirely absent. France, as might have been expected, occupied two-thirds of the available space; other countries were handicapped by the expenses of transport and exhibition. British manufacturers in particular " took a short-period view of their own interest in participation," nor did they, like exhibitors from other States, receive financial assistance from their Government. The British section therefore gives an incomplete idea of the real strength of British art production. Its exhibits show excellence of craftsmanship and finish, but, the experts agree, an absence of the spirit of adventure. In Pottery the palm goes to Denmark, in Glass to Sweden, in Mural Decoration to Poland. It is suggested that the English glass manufacturer has little chance of regaining the position he once held in the markets of the world, unless he ceases to be restricted by legislation as regards the age at which boys may begin to learn their trade. In Furniture the British show practical

genius for well-constructed cabinet work, but no masterpieces nor anything approaching the French facility and versatility of design. On the other hand, 80 per cent. of the French designs are likely to be as *démodé* in ten years' time as the styles of 1900 are to-day, while some of the English products are "so right and well-mannered" that they will be equally acceptable fifty or a hundred years hence. In printing originality is difficult to achieve, for the craftsman can hardly hope to improve on the admirable models of the past. There is scope, however, in commercial printing, and it is disappointing that no English work was shown here. Nor was Great Britain represented in Poster Art, where she would have taken a high, if not the highest, place.

The Exhibition reflected some notable changes in world economic conditions. The impoverishment of the middle and upper middle classes is responsible for the change from large to small houses, from large and lofty to small and low-ceiled rooms. Furniture accordingly tends to become smaller, lighter and cheaper, and rugs take the place of carpets. Other changes are due to scientific and technical discoveries. Improved technique leads to the use of plain, unbroken surfaces in furniture. The invention of artificial silk and other textile fibres, under pressure of a world shortage of wool, has led to a remarkable development of new fabrics. In general the most hopeful tendency is the obvious collaboration in many departments between artist and craftsman.

The Report attempts to estimate the force of international influences, and the resisting power of "artistic nationalism," and concludes that these vary widely as between different nations and different branches of industrial art. A "fierce if transitory ebullition of patriotism" in the art of some Central and Eastern European countries is a legacy from the war. Poland shows a strong determination to maintain a distinctively national character. Switzerland, on the other hand, is very cosmopolitan, and France occupies in this respect an intermediate position. The national spirit is strongest in garden art, while pottery and printing are practically internationalised, and in their designs of carpets, silks and jewellery, all European nations tend to borrow from the East. British designers of an earlier age, *e.g.* William Morris, and in a less degree Aubrey Beardsley, exerted a profound and lasting influence on foreign countries. But Great Britain herself stands completely aloof from foreign influence, and apparently indifferent to foreign art movements.

The Exhibition of 1925 has been acclaimed in some quarters

as a real renaissance. It was, at any rate, an event of first-class artistic and economic importance, and the part played by this country cannot but cause some heart-searching. It is admitted that the British exhibits were comparatively dull and lacking in novelty. Is this sanity, restraint, a due respect for the continuity of a good tradition? Or is it merely rigidity, a tendency to cling to outworn models, in short decay? The authors of the Report do not hazard a reply, but they put the question with emphasis and insistence. They mean to sound a warning note, and hope that it may not fall on heedless ears. They have done it well, and the Report itself is no mean artistic achievement.

H. REYNARD

King's College for Women, London.

Minimum Wage-Fixing Machinery: an International Study of Legislation and Practice. [P. S. King (for the International Labour Office). 2s. 6d.]

THE International Labour Office has published as a separate report the survey of minimum wage legislation prepared for the Tenth Session of the International Labour Conference. The report falls into two parts: a description, country by country, of the legislation in force; and an analytical study of the objects, machinery and bases of such legislation, and of the problems of demarcation and enforcement that it raises. It is a very compact and objective account of its subject. To the references given under the head of each country one or two additions suggest themselves: under South Africa, the Report of the Economic and Wage Commission, which criticises the 1925 Wage Act; under Australia, the important report of the Queensland Basic Wage Commission, and, since Dr. Sells' articles on State Wage Regulation in Australia are included, the criticism of them by Mr. Benham in the volume of *London Essays on Economics* presented to Dr. Cannan.

H. CLAY

Memorandum on Malting Barley Tax. (Cmd. 2996. 3d.)

THIS tax was proposed by the Agricultural Tribunal of Investigation in 1923, as a method of maintaining arable cultivation on light soils, and of avoiding the objections to taxation of foodstuffs, of either persons or livestock. It has been found that

their proposal to levy it at the breweries, which would make it an excise, is contrary to our commercial treaties. This Memorandum therefore deals with the problem of levying an import duty on that part of the incoming barley which is destined for a particular use. It is shown that the administrative problems thereby raised are very serious. Further, there are the complications due to the considerable import of foreign malt and malt extract. And finally, the demand of brewers for foreign barley is not elastic since its quality renders its use necessary at any price for admixture. For these reasons, the Government do not see their way to endorse a proposal for helping agriculture which has played a large part in recent controversy.

Bibliographie der Sozialwissenschaften. Monatshefte der Buch- und Zeitschriftenliteratur des in- und Auslandes über Gesellschaft, Politik, Wirtschaft, Finanzen, Statistik. Herausgegeben vom Statistischen Reichsamt, Berlin. (Pp. *circa* 100.)

THE attention of our readers is drawn to this official monthly classified bibliography of books, pamphlets, and articles published in all countries, now in its twenty-third year of issue.

Report of the Controller of the Currency for the year 1926-27. (Calcutta: 1927. 1 rupee.)

INDIA'S international account; foreign trade and bullion; course of exchange and sterling operations; Government balances and reserves; monetary conditions in India; the public debt; demand for various forms of currency; note circulation.

Reparation Commission. Official Documents No. XVII. *Report of the Agent-General for Reparation Payments, December* 1927. (Stationery Office. 4*s.* 6*d.*)

THIS Report includes the correspondence between the Agent-General and the Finance Minister of the Reich of October–November 1927. It concludes that "as time goes on, and practical experience accumulates, it becomes always clearer that neither the reparation problem, nor the other problems depending on it, will be finally solved until Germany has been given a definite task to perform on her own responsibility, without foreign supervision and without transfer protection."

The Swedish Economic Review. (Swedish Board of Trade: Quarterly.)

THE economic situation in the third quarter of 1927 was favourable, and foreign trade was brisk. Balances abroad of the Swedish banks were twice as large as in 1926.

Statistique des finances de l'Union des républiques sovietiques socialistes. Livraison 8: October 1927. (Moscow: Commisariat des Finances.)

NATIONAL and local budgets; monetary circulation, monthly; balance sheet of the Union Bank; indices of the Conjuncture Institut; wholesale and retail prices.

OBITUARY

PROFESSOR ROBERT ALFRED LEHFELDT

BY the accidental death on September 11, 1927, of Professor Robert Alfred Lehfeldt, South Africa has lost her leading economist, and Economic Science one who through sheer brilliance of intellect conquered the difficult conditions under which he laboured, which perhaps only those who have watched the growth of Johannesburg can realise, and contributed widely to international economic literature.

Lehfeldt was born at Birmingham on the 7th May, 1868, the second son of Dr. F. W. A. Lehfeldt (d. 1876), at the time a master at the Edgbaston Proprietary School, Birmingham, and Madame Lehfeldt (d. 1897), pianist. His early education was at private schools at Margate and Barnes. Already as a boy he showed the striking self-reliance and independence of thought which characterised his later work, an instance of which is that when not yet sixteen years old he on his own suggestion left school in order to study by himself with a view to a University career. This he carried through by the means of scholarships eked out by the help of friends who recognised the quality of his character and ability. At the age of sixteen he passed the Cambridge Local Examination with Honours, and with distinction in Mathematics, and in the same year, 1884, he Matriculated (First Division) at London University, where he obtained the degree of Bachelor of Science in 1889. He had entered St. John's College, Cambridge, in 1887 and graduated there as Bachelor of Arts three years later. In 1890 he became a Demonstrator at

Frith College, Sheffield (now University of Sheffield), and Professor of Physics at East London College in 1896. He was elected a Life Fellow of the Physical Society in 1895, and from this time onwards contributed frequently to its proceedings, also serving on the Council of the Society from 1901 to 1903. In 1902 he published *A Text-book of Physical Chemistry*, followed four years later by *Electro-Chemistry* in Sir William Ramsay's Series on Physical Chemistry. In the meantime he had taken the degree of Doctor of Science at London University, and in 1906 he accepted the Chair of Physics in the South African School of Mines and Technology (now the University of the Witwatersrand), Johannesburg. In 1909 he became a Fellow of the Royal Society of South Africa, and was for many years a member of the Council of the Society.

Lehfeldt was an extremely brilliant mathematician and statistician, and profoundly attracted to the application of mathematical methods to Economic and Sociological problems. It is therefore not surprising that his work in Physics did not alone hold his attention. From 1911 onwards he contributed more and more frequently the results of various mathematical investigations in Economics and Statistics to the ECONOMIC JOURNAL and the *Journal of the Royal Statistical Society*. Among these a series of articles on "Public Loans and the Modern Theory of Interest" (1912) and on "The Rate of Interest on British and Foreign Investments," in 1913, deserve special mention. In 1913 he attended the Fifth International Congress of Mathematicians held at Cambridge, and contributed a paper on "The Disturbance of Economic Equilibrium." In the same year he became the correspondent of the Royal Economic Society for South Africa. He married, at this time, at Cape Town Cathedral, Violet Douglas Renwick, daughter of the late James Renwick, shipowner.

On the reorganisation of the School of Mines and Technology in 1916 he finally decided to devote himself entirely to Economics, and accepted the new Chair of Economics and Statistics in exchange for that of Physics. The eleven years which followed were years of indefatigable research both into South African and into international economic problems. In 1916 he published *Economics in the Light of War*, a little book which indicates admirably his calm, scientific and deeply sympathetic outlook. He was an admirer of Ricardo and his method, and a follower of the Classical Economists; yet on every occasion he would be the first to point out where their assumptions or conclusions

were no longer warranted, and ready to support that more active "Development of a Collective Self-Consciousness in Economic Matters" where this seemed desirable and practical, which he regarded as inevitable. Taking as the basis of his economic researches problems of importance at the moment, he would subject them to a searching analysis in order to unravel their deeper causes and more lasting effects. Thus already in 1916, in *Economics in the Light of War*, he was more interested in the lessons to be learned from the war and the co-operative economic experiments which had resulted in many countries, than in its more immediate economic results.

In 1917 he was appointed a member of the new Statistical Council of South Africa, to which, until his death, he gave unstintingly, and unobtrusively, of his wide knowledge of South African conditions in helping to lay the foundations of the national organisation and supply of statistics.

In all his work on South African problems he showed the same impartial judgment which aimed always at emphasising the fundamental economic needs of the country and of the study of its problems, and resolutely shunned political controversy. In a preliminary survey of agricultural production, which formed the first of a series of publications issued by the South African Board of Trade and Industries, he counselled the national and regular collection of information and the systematic keeping of cost accounts, and showed how these could best be applied in organising agriculture on a sound basis. He himself followed up his suggestions for a more adequate statistical study of the Union's problems by publishing in 1922 *The National Resources of South Africa*, in which he was the first to make an estimate of the national income of the country and to analyse comprehensively its economic activities. It was perhaps this book more than any other which directed the attention of South African legislators and students to the generally low productivity of the country, and to a truer appreciation of the contribution made to its welfare by the coloured and native population.

In July 1920, at Bulawayo, in his Presidential Address to Section F of the South African Association for the Advancement of Science, of which he had for many years been an active member, he referred to that most important of all South African problems, the Native question. In his address he summarised volumes of controversy in a few pithy sentences. With great foresight he showed how either there would have to be complete segregation of the races, or, quite inevitably, economic, and probably also racial, diffusion between them. He concluded his remarks with

the significant reminder "that a country will in the end belong to the people who do its work." He gave evidence before numerous Commissions on South African economic questions, not the least valuable of which was that tendered to the Gold Standard Commission in 1924. His appearance on this occasion illustrates his extreme modesty. Notwithstanding his wide study of Currency questions, he only consented to appear before the Commissioners "to talk things over" after being pressed several times to do so, and explained his reluctance to give evidence because he feared that his judgment on the material in his possession would be of little value to the Commissioners. It is significant to record that the subsequent "talk" extended over some thirty pages of the evidence, and that the ultimate report coincides almost entirely with the views therein expressed. He was largely responsible for the formation of the Economic Society of South Africa, of which he was a Vice-President.

His activities in South Africa were not confined to his scientific work. Lehfeldt had a deep love for music, in which, as well as in literature and art, he was keenly interested wherever he went. For many years he was musical and dramatic critic for a number of South African newspapers and was a member of several dramatic societies. He sang in public on various occasions, among others in England, at concerts given by his mother between 1893 and 1896.

Outside South Africa Lehfeldt was known mainly by his work on Currency questions and his frequent contributions to the ECONOMIC JOURNAL and other scientific journals. He had long been a student of problems connected with the value of money and the rate of interest, and it is not surprising that his first book, after his appointment to the Chair of Economics, entitled *Gold Prices and the Witwatersrand* (P. S. King & Son, 1919), should have dealt with the relation of the supply of gold to the course of prices, with special reference to the Witwatersrand gold output. In this book he briefly suggested a plan for regulating the value of gold rather by the international control of the supply of gold than of the demand for the metal. He elaborated the plan in 1923 in his book on *Restoration of the World's Currencies*, which was a study of the monetary problems of the day with special reference to the probable long-period changes in the value of money. In 1926 he published a text-book on *Money* in the World's Manuals Series, which was to be the forerunner of a comprehensive treatise on "Money," including a re-examination of the theory of international trade, on which he was engaged at the time of his death. He restated his views

on the possibility of stabilising the value of gold by means of the international control of the supply of gold in a series of articles in the *Economist*, which were reprinted under the title *Controlling the Output of Gold* in 1926. In the following year he published a text-book on *Descriptive Economics*. His books are throughout characterised by a remarkable simplicity of style and clarity of thought, and by the happy ability of illustrating difficult economic concepts from everyday facts, which makes them especially useful to students. His keen interest in, and successful work on international economic questions is all the more to be admired as Lehfeldt had almost continually to overcome, as best he could, the lack of suitable statistical material and works of reference. It is deeply to be regretted that, cut off in the prime of his activities, it was not given him to realise his intention of continuing his research work overseas, after his impending retirement from the Chair of Economics.

As an old student it is with deep gratitude and with memories of many pleasant years that I refer to Lehfeldt as a teacher. He was extraordinarily conscientious about the progress of his students. His well-balanced lectures aimed continually at stimulating interest in every branch of economic science and every type of economic activity. He took considerable pains to collect together a library representative of international economic thought notwithstanding the meagre funds at his disposal for this purpose. His lectures on elementary economics were made especially interesting by the success with which he presented the essential facts of economic life in an introductory descriptive course. He preferred teaching his senior students by holding frequent seminars, by stimulating continuous independent reading and by directing their attention to important local problems and asking them to write their views about them in order to discuss these with him. He instinctively understood the difficulties of others and presented his stores of knowledge with remarkable clearness and persuasiveness. To those who confided in him, and did not misunderstand his retiring modesty and shyness, he was a constant friend, adviser and helper. A large circle of friends and correspondents in Europe, America and South Africa, and his colleagues and students at the University of the Witwatersrand will mourn his loss. South Africa is incalculably the poorer through the premature death of a deep thinker who, at all times, unbiassed by the many conflicting interests which dominate the development of a young country, directed his attention and the attention of all with whom he came in contact to constructive efforts for the future. S. HERBERT FRANKEL

Current Topics

The following have been elected to membership of the Royal Economic Society :—

Baines, H.
Basenach, Prof. F.
Beales, H. L.
Bean, W. M.
Bermudez, J. M.
Best, R. D.
Brian, A. V.
Britnor, S.
Butler, A. B.
Chetty, G. V.
Chilcott, A.
Donald, W. J. A.
Duncan, W. G. K.
England, R.
Ethell, J. C.
Fitzhugh, W. E.
Flaskett, A.
Forsey, E. A.
Goldberg, M. N.
Gooding, I.
Greenhill, E.
Greig, C. R.
Hamilton, H. J.
Handman, Prof. M.S.
Harding, A.
Harris, S. E.
Hill, I. C. M.
Hori, Prof. T.
Horner, F.
Hughes, C. J. G.
Innis, Prof. H. A.
Isle, W. H. M.
Iyer, T. G. M.
Jager, W. P.
Kitto, D. F.
Koppel, G.
Lawn, G.
Lawson, G. R.
Main, Miss A. M.
Maples, C. J.
Mardon, A.
Marget, Prof. A. W.
Maxton, G. S.
Meeker, J. E.
Miller, F. J.
Moghy, S.
Morris, F. C.
Mudgett, Prof. B. D.
Mynors, H. C. B.
Nef, Prof. J. U.
Parker, G. F.
Pearson, F. G.
Phillips, P.
Pitcher, R. J.
Plucknett, Prof. T. F. T.
Puplett, E. A. R.
Richardson, J. C.
Robbins, L.
Rochfort, R. A., Capt.
Routledge, C. P.
Russell, E.
Seenivasagam, S.
Slater, Dr. G.
Smith, A. J.
Stretch, T. R.
Sutherland, Miss L. S.
Taylor, F. W.
Thomas, R. J.
Tomlin, W. L.
Townsend, R. W.
Tucker, W. W.
Waite, T. H.
Wedgwood, J.
Whellock, L. A.
Whittaker, E.
Willis, A. W.
Willoughby, J. M.
Worley, F. E.
Yorston, R. K.
Zvaitch, I. S.

The following have compounded for life Fellowship of the Society :—

Bladen, V. W.
Brigden, J. B.
Chamberlain, J. A.
Chari, V. T. K.
Cohen, V.
George, C. F.
Horner, F.
Innis, Prof. H. A.
Koppel, G.
Mardon, A.
Mudgett, Prof. B. D.
Riches, E. J.
Slater, Dr. G.
Whyte, W. H.

The following have been admitted to Library membership :—

Colgate University Library, Hamilton, New York.
Christ Church Reading Room, Oxford.
Hood College Library, U.S.A.
Public Library of New South Wales, Sydney.
Public Library of South Australia, Adelaide.
St. John's College Library, Annapolis, U.S.A.
Union College Library, Schenectady, N.Y.
University of Stellenbosch, South Africa.
Vanderbilt University Library, Tennessee.
Wakefield Technical College.

We record with regret the death of the undermentioned Fellow of the Society :—

Herdman, J. O.

We much regret to announce the death of M. Yves-Guyot, the great apostle of *laissez-faire* in modern France, in his eighty-fifth year. We hope to publish some account of him in the June JOURNAL.

Professor Allyn Young has been elected President of Section F of the British Association at the Glasgow meeting to be held this year.

Two further Memoranda, published in collaboration with the London and Cambridge Economic Service, have been issued to Fellows, namely :—

5. *Quarterly Bulletin of Statistics*, January 1928.
6. *Report on Economic Conditions in Europe*, February 1928.

Our Dutch Correspondent sends us the following notes :

(1) A Bill has been submitted to the Second Chamber in which the position of the Central Bank of Surinam (Dutch West Indies) is regulated. This Bill is almost identical with the Law on the Java Bank and differs from the present Charter in so far as the right to issue notes is to be granted for 15½ years, the reserves are to be increased, the sphere of action of the bank is

to be enlarged (including the services to be rendered gratis to the Government) and the division of profits is to be altered.

(2) A Bill has been submitted for consideration which renders persons of Dutch nationality resident abroad liable to income, property and defence taxes, to be assessed on the basis of the maximum amount paid in respect of the same taxes during the last three years of residence in Holland, cases of default to be punished by the withholding of passports, registrar's documents, etc.

(3) The Dutch Employers Association has invited the trade unions to a joint conference. It refers in this connection to the lack of understanding and co-operation which has been only too much in evidence and to the solidarity of the interests of both parties, on a broad view. The invitation has been accepted by the trade unions and a conference was to take place in February.

RECENT PERIODICALS AND NEW BOOKS

Economica (London School of Economics).

DECEMBER, 1927. *Tariffs and the Distribution of Foreign Trade.* R. A. LEHFELDT. In this article, Prof. Lehfeldt adopts the price instead of the barter method, and gives diagrams for relating the trade of a particular country to that of the rest of the world. He uses both supply and particular expenses curves, in order to apply the method to both forms of returns. The reactions of protective policies are based on a derived formula; the reasoning on its application is difficult, and would have gained by elucidations of statement, but the method is original and ingenious. *The Explanation of the Business Cycle.* J. SCHUMPETER. In an appreciative study of the analysis of Pigou and others, Prof. Schumpeter makes an important contribution of his own views, the outline of which thus becomes accessible to English readers. *The Study of Primitive Economics.* R. FIRTH. A plea for the consideration by economists of a wider range of phenomena, before general propositions are laid down; followed by a review of the work of Bücher and others in the field of the development of institutions. *The Contemporary Background of Hobbes' "State of Nature."* P. DOYLE. *Municipal Research Work in America.* W. A. ROBSON. An account of municipal research bureaux, and their influence on local administration. *The Methodology of the Measurement of Labour Turnover.* I. GODDARD.

The Economic History Review.

JANUARY, 1928. *The Teaching of Economic History in Schools.* C. H. K. MARTIN. *Russian Work on English Economic History.* E. A. KOSMINSKY. *Credit in Mediæval Trade.* M. POSTAN. *War Trade and Trade War,* 1701–1713. G. N. CLARK. *The Development of the Cotton Industry in France, and the Anglo-French Treaty of* 1860. A. L. DUNHAM.

The Economic Record (Melbourne).

NOVEMBER, 1927. *The Australian Public Debt.* E. C. DYASON. This examination of the burden of the debt is based largely on the conclusions of Mr. Sutcliffe's *National Dividend,* which is the subject of a review and discussion in another article, to which Messrs. L. F. Giblin and F. C. Benham contribute. (See also review in this JOURNAL.) The conclusion is that the Australian Debt can be sustained on the income with comparative ease. *Australian Productive Efficiency.* C. H. WICKENS. An investigation by the Commonwealth Statistician for the years 1908–24. The most marked fluctuations have been due to drought. The increase in production per person for the terminal in relation to the initial quinquennium has been for "greater agriculture" 3 per cent., for manufactures 6 per cent., for a combined group

of industries 1·6 per cent. *Australian Credit as viewed from London.* H. COLEBATCH. Chiefly a reply to certain London criticisms of Australian borrowing. *New Zealand and Asiatic Immigration.* T. D. H. HALL. The history of the Chinese question, and the racial issues involved. *The Australian Tariff and the Standard of Living.* A restatement by F. C. BENHAM, who continues this controversy, and is replied to by J. B. BRIGDEN. *Australian Business Finance.* F. V. MAGEE. An examination of published balance-sheets of limited liability companies, in order to determine how funds are obtained and how disposed among assets. The total number of companies examined is 619. *The Mechanism of International Capital Transfer under the Gold Standard.* M. PALYI. An appreciation of Prof. Viner's researches, taken as a model study.

Quarterly Journal of Economics (Harvard).

NOVEMBER, 1927. *Economics as a Field of Research.* ALLYN A. YOUNG. The social sciences differ from the physical in the special *orientation* of their problems, especially as regards the nature of the observer's *interest*, which bears on the extent to which historical research can co-operate with scientific inquiry. A discussion follows of group and individual research, with emphasis on the factor of constructive imagination, which depends on individual interest. *The Monetary Situation in the United States, as viewed from without.* R. A. LEHFELDT. Notes, in the light of theory, on some recent tendencies, especially the increased tendency to save on the part of the public, and that of manufacturers and merchants to provide their own working capital. *John Bates Clark; Earlier and Later Phases of his Work.* P. T. HORNAN. *The National Income of the Soviet Union.* L. N. LITOSHENKO. A comparison, chiefly with the United States, of net production by industries, income per head, and distribution of income between occupations and individuals. *Classification of Land for Taxation.* J. V. VAN SICKLE. The property tax on the market value of land is held to cause wasteful utilisation, and, after discussion of other methods, a classified land tax is suggested.

American Economic Review.

DECEMBER, 1927. *Rubber: a Case Study.* W. ORTON. A statistical study of the growth of production in this century is followed by estimates of the elasticity of demand and supply, and is illustrated with important diagrams. It is concluded that the restriction scheme is limited to the functions of a temporary palliative, and that the ideal control would be a control of *planting*, but not on a national basis. *Interest Theory and Theories.* H. J. DAVENPORT. Certain similarities between contract rents and interest are noted, but rents do not explain, since they involve, interest *rates*. The discussion is therefore transferred to the market for funds, various points in the theories of Böhm-Bawerk, Clark, and Fetter being weighed in relation to each other. *Going Value.* B. W. LEWIS. A discussion related to the article of Prof. Waltersdorf in the number for March 1927 concludes that "going value" should be rejected as a concept without legitimate content. *Friedrich von Wieser.* O. MORGENSTERN.

Review of Economic Statistics (Harvard).

OCTOBER, 1927. *Review of the Third Quarter of the Year.* The developments reflect a healthy condition of business in the U.S., and will operate, if continued, to sustain international commodity prices, and facilitate economic recovery in countries returning to the gold standard. *The Theory of Economic Cycles based on the Capitalistic Technique of Production.* A. AFTALION. In six pages, Prof. Aftalion gives a summary of the theory of his *Crises périodiques de surproduction*, and indicates the nature of the statistical evidence involved. This method seems worthy of extension to other cases. *Wholesale Commodity Prices in the U.S., 1795-1824.* W. B. SMITH. Concludes that the main explanation of business fluctuations in this period is the influence of political events. *A General Theory of the Correlation of Time Series of Statistics.* M. K. ZINN. A general equation of time correlation yields a "system factor," which can be solved for. The method, applied to the correlation of interest rates and wholesale prices, gives the result that the interest rate at any time "is related in a systematic manner to the preceding values of wholesale prices as well as to the concurrent values."

Wheat Studies of the Food Research Institute (Stanford University, California).

NOVEMBER, 1927. *The World Wheat Situation*—1926–27 : *A Review of the Crop Year.* In 1926–27 world acreage and international trade attained record heights, and the world crop approached the record yield of 1915–16. But in most other respects the year was fairly normal. The crops were well distributed and no major producers harvested bumper crops or suffered crop failure. World wheat stocks, which had been generally low at the beginning of the crop year, were larger than usual at its close.

DECEMBER, 1927. *Statistics of American Wheat Milling and Flour Disposition since* 1879. Flour consumption in the U.S. increased in direct proportion to population up to 1903, but more slowly between 1903 and 1917. After the entry of U.S. in the war, it was reduced over 10 per cent., and since 1918 has remained constant at the reduced level of nine-tenths of a barrel per head per annum.

JANUARY, 1928. *Survey of the Wheat Situation August to November* 1927. The world wheat crop, exclusive of Russia and China, now appears the largest in post-war years except 1923; but it is little above the line of normal growth.

Journal of Political Economy (Chicago).

OCTOBER, 1927. *Indian Currency since the World War.* J. L. LAUGHLIN. From 1917, when the price of silver raised the rupee out of the position of a token coin, till 1920, the exchange varied with the price of silver. The theory of purchasing-power parity is not accepted as an explanation of variations. The writer deals critically with the Babington-Smith Report, and is generally appreciative of the Young Report. *Investigation of Industrial Disputes.* C. E. WARNE and M. E. GADDIS. An account of the Colorado law of 1915 for the compulsory investigation of industrial

disputes, modelled on the Canadian Act, and requiring that strikes or lock-outs shall not be called until the expiry of thirty days for inquiry. Statistics of its operation are tabulated, but on the whole the value of this plan is represented as doubtful. *A Dynamical Theory of Economics.* C. F. Roos. An elaborate mathematical analysis. *The Federation of Catholic Workers of Canada.* H. A. Logan. *Offerings in Economics in* 1925–6. L. C. Marshall. An investigation into courses in Economics at Institutions in the United States, classified by States, Geographical Divisions, and Subjects, for 1910–11 and 1925–6. *Mathematical and Statistical Economics.* H. Schultz.

December, 1927. *Rate-Making and Excess Income.* G. G. Tunell. The legal problem of valuation in the determination of fair rates by common carriers. *The Impasse in Economic Theory.* P. T. Hornan. A discussion, with special reference to Clark and Marshall, of the relation of the theoretical constructions to the positive exploration of the pattern of modern economic life. *Individual Cycles in Stock Prices.* F. B. Ashby.

Annals of the American Academy of Political and Social Science (Philadelphia).

November, 1927. *Europe in* 1927 *: an Economic Survey.* By Prof. E. M. Patterson. The general conditions are reported on by Prof. Patterson from investigations on the spot, as regards population, migration and unemployment, production and productive capacity, foreign trade and tariffs, tax burdens and budgets, price movements and currency policies, international indebtedness. These matters, with much comparative statistical tabulation, and certain conclusions as to the outcome of existing financial strains, take up the first half of the Report. In Part II, certain special phases of European conditions are discussed by authoritative writers such as Prof. Ohlin on the currency situation, Dr. Lammers on the Cartel question, Mr. H. B. Butler on Labour in Europe. A great deal of material is made both available and attractive in 230 pages.

Revue d'Économie Politique (Paris).

September–October, 1927. *L'économie pure du système économique présent.* E. Antonelli. A statement of equations of price. and a classification of economic goods. The problem of pure economics is the application of the former to the conditions and proportions of the latter. *Les index économiques.* R. Roy. A mathematical investigation of indices, not yet completed, yielding a number of general equations. *L'accord commercial franco-allemand.* C. J. Gignoux. *Droits et intérêts étrangers en Chine.* J. Escarra. *Billets de banque et crédits en banque.* A. Pose. It is argued that these are not interchangeable in their influence, first, because a banker's bank depends finally on its power of issue; second, because inflation by the method of bank credits has less influence on prices than inflation by direct note issues. This is due to the control exercised by the banks over loans, which are thus directed to productive purposes, while control over note issues is lost.

NOVEMBER–DECEMBER, 1927. *Les charges de l'Espagne sur l'Amérique au XVI^e^ siècle.* A. E. SAYOUS. *L'organisation scientifique du travail dans ses congrès.* M. AUCUY. *Droits et intérêts étrangers en Chine.* J. ESCARRA. *Les index économiques.* R. ROY.

Journal des Économistes (Paris).

NOVEMBER, 1927. *La houille et les métaux en Extrême-Orient.* YVES-GUYOT. The resources are greater than the power to use them. *Les cours des valeurs de chemins de fer en* 1926. G. DE NOUVIONS. "*La Carta del Lavoro.*" N. MONDET. A brief examination of the text of the Italian law of April 1927.

DECEMBER, 1927. *Jean-Baptiste Say et la Loi des débouchés.* YVES-GUYOT. *La Trésorie des banques.* P. CAUBONE. *La fiscalité mobilière en France et à l'étranger.* F. FRANÇOIS-MARSAL.

JANUARY, 1928. *Les équilibres budgetaires de* 1927 *et de* 1928. YVES-GUYOT. *Suspension de la loi sur l'exportation des capitaux et le redressement financier.* X.

Revue de l'Institut de Sociologie (Brussels).

OCTOBER–DECEMBER, 1927. *La formation des chefs d'entreprises.* J. WILBOIS. The aptitudes are partially innate; the most favourable environments for development are "la bourgeoisie ouverte sans excessive richesse, la famille nombreuse et morale, et les groupements où l'on n'a pas un culte exclusif de la politique." A *general* educational culture is the best completion of the right qualities.

Vierteljahrshefte zur Konjunkturforschung (Berlin).

2 Jahrgang, Heft 3. The phase of high activity which began to show itself at the end of August has fully developed. Credit is highly extended, bill drawings have greatly increased, and outside the banking sphere there is an increase in the self-financing of industry. Though there are signs of the commencement of glut, the home market is still able to support prices. But in some important branches of industry new orders are receding. A downward movement must be reckoned with, but the conditions are such that its effects can be alleviated. (End of November.)

2 Jahrgang, Ergänzungsheft 2. *Saisonschwankungen im Warenhaus-Umsätzen.* (Official.) *Monopole und Konjunktur.* E. LEDERER. An analysis of the influence of monopoly policy, distinguishing between Kartells and Trusts, with reference to accumulation and investment of returns. *Deutschlands Betriebskapital.* JULIUS HIRSCH.

Sonderheft 2. *Die Prognose der Schweinepreise.* A. HANAU.

Sonderheft 4. *Die Analyse von Wirtschaftskurven.* H. HENNIG. An elaborate statistical investigation.

Sonderheft 5. *Der Guterverkehr und seine Veränderungen in der Nachkriegszeit.* W. TEUBERT.

Weltwirtschaftliches Archiv (Jena).

JANUARY, 1928. *Vom Bedarf und den Grundlagen seiner Deckung.* F. VON GOTTL-OTTLILIENFELD. *Wissenschaft und Wirklichkeit.*

A. HESSE. *Das Problem der aüsseren Handelspolitik bei Friedrich List und Karl Marx.* A. MENSEL. *Ideengeschichte der Agrarwissenschaft in Russland.* J. SCHIRKOVITSCH. *Funktionen des Export- und des Import-handels.* E. ROSENBAUM. *Changes in the Purchasing Power of Manufacturing Labour Incomes in the United States,* 1899–1925. P. F. BRISSENDEN. An elaborate statistical and graphical account by reference to localities, manufacturing industries as a whole, and selected industries.

Jahrbücher für Nationalökonomie und Statistik (Jena).

OCTOBER, 1927. *Vom Sachgut zur socialen Willenproduktion.* A. LAMPRECHT. *Entsprechung als Grundlage der Ertragstheorie.* W. WEDDIGEN.

NOVEMBER, 1927. *Zur Neuordnung des Finanzausgleichs.* R. STUCKEN. *Bedarfsdeckung in Haushalt.* RIEDENAUER.

DECEMBER, 1927. *Die Ganzheitslehre O. Spanns.* R. STALZMANN. *Die logische Natur der quantitativen statistischen Merkmale mit besonderer Berücksichtigung des Problems der Gruppenbildung.* P. FLASKÄMPER.

Archiv für Sozialwissenschaft und Sozialpolitik (Tübingen).

JULY, 1927. *Zwei Beiträge zur Theorie der Umlaufgeschwindigkeit des Geldes, II.* PROFESSOR A. SOKOLOFF here makes an analysis, somewhat refined, but on familiar lines, of the influence of taxation on the price level. The argument is mainly based on the equation of exchange. More is said about indirect than direct taxes, and certain useful practical conclusions are derived : thus regulation of indirect taxes is especially valuable to reduce non-productive consumption. *Grundsätze für die Anleihepolitik.* DR. R. STUCKEN discusses the principles of loan policy in respect of productive and unproductive loans, and short and long periods, with respect to canons formulated by Wagner. Careful discrimination is made of types of desirable borrowings.

OCTOBER, 1927. *Preis- und Produktionsstabilisierung in einzelnen Produktionszweigen.* PROFESSOR A. C. PIGOU writes an important article examining the possibilities of stabilising prices and production in single branches of production. Generally speaking unions of producers are likely to be effective, since stabilisation would lower production costs, lessen future uncertainties and unemployment. *Zur Einführung der folgenden Arbeit Knut Wicksells.* PROFESSOR J. SCHUMPETER calls Wicksell the "Swedish Marshall," and says his work has not received adequate recognition. Main contributions are to theory of value and to theory of credit. Comparison is made throughout between his and Bowley's work. *Mathematische Nationalökonomie.* DR. KNUT WICKSELL.

Zeitschrift für die Gesamte Staatswissenschaft (Tübingen).

SEPTEMBER, 1927. *Volkswohlstandslehre und Volkswirtschaftslehre.* DR. K. DIEHL gives a critical but clear and versatile review of Professor Amonn's *Outlines of the Doctrine of National Welfare.* The basis of Amonn's scheme is a division into static and dynamic. He disapproves of methods of pure economics, since the subject

is overwhelmingly a social study; there is much more of value in historical method. DR. DIEHL thinks Amonn leans to the Classical School, yet accords with Schumpeter's views; undervalues methods of equilibria; deals inadequately with Capital; confuses Cassel's theory of Price and Marginal Utility; and generally is too eclectic. *Grundlagen der Steuermoral.* DR. O. VEIT thinks public opinion on tax evasion is of deplorably low standard and discusses remedies exhaustively.

JANUARY, 1928. *Wertenteile, Wertbegriffe, und Werttheorien.* A VOIGT. *Kapitalzins und wirtschaftliche Entwicklung.* O. ENGLÄNDER.

Schmollers Jahrbuch (Munich and Leipzig).

OCTOBER, 1927. *Zur Frage der Grenzproduktivität.* DR. W. VALK. *Zur Frage der Grenzproduktivitat. Entgegnung auf den vorstehenden Aufsatz von W. Valk.* PROFESSOR J. SCHUMPETER. Dr. Valk asserts that the marginal doctrine, while valid for theory of value, is useless for distribution. For this he would substitute a synthesis of it with the doctrines of the Walras-Cassel school. Thus he disapproves of Schumpeter's criticisms of Cassel. Professor Schumpeter replies in defence of the marginal doctrine. The defence is direct, tenacious and illuminating. *Die Wesensverwandtschaft des zwischenstaatlichen und des binnenstaatlichen Zahlungsverkehrs.* DR. J. SCHEFFLER. *Zur Frage der Dynamik und der Systematologie des Geldes.* DR. J. J. PIKLER. A lengthy philosophical discussion.

Scientia (Bologna).

DECEMBER, 1927. *Nazionalismo ed internazionalismo economico.* A. LORIA. On the one hand, the chief feature of modern times is the growth of economic internationalism in the form of international cartels; the export of capital; emigration; joint action by central banks; the international labour movement, etc. On the other hand, these movements provoke reactions inside the different countries in favour of economic nationalism, as indicated by the raising of tariff walls; restrictions placed on immigration; the revolt of the backward countries against exploitation and the power of foreign capital; differential duties against dumping, against importation of goods made with sweated labour, etc. The words of Monsieur Loucheur are quoted with approval: "If it is possible, by means of a series of agreements between the principal industries of Europe, to create a peaceful atmosphere, a blow will have been struck at the causes of armed conflicts and more will have been accomplished for the maintenance of peace than by all the treaties of arbitration and disarmament that can be imagined."

JANUARY, 1928. *L'organisation rationelle de la production économique.* W. OUALID. A brief appreciative account of the "rationalisation" idea in relation to the individual enterprise, the national combines, and the international agreements.

Indian Journal of Economics (Allahabad).

JULY, 1927. *Deficits and Surpluses in the Accounts of the East India Company.* P. M. BANERJEE. *The Hindu Taxation System.* Dr. BALKRISHNA. *The Influence of Custom in the Evolution of*

Anglo-American Economic Society. C. A. Warburton. *Raiyati Holdings in Bengal.* S. A. Latif.

Okonomi og Politik (Copenhagen).

This quarterly Journal of the Institute of Economics and History at Copenhagen was first issued for the quarter-year January–March 1927. The issues to hand are accompanied by statements in English of the course of the Danish conjuncture up to the middle of last year. In addition to reviews of the home and foreign economic situation, amplified by conjuncture-curves, the first issue has brief articles on *International Trade Agreements* and *Modern Conjuncture Investigation*; the second on the *Problem of Employment after the War.*

De Economist (Haarlem).

November, 1927. *Over de mathematics-stastistiesc methoden voor konjunktuuronderzoek.* J. Tinbergen. A discussion of the methods of constructing economic barometers, with special reference to the "cumulative process" of K. G. Karsten. The writer defends the method against the criticisms contained in the article on "The Construction and Interpretation of the Harvard Index of Business Conditions" in the *Review of Economic Statistics* of April 1927. *Koloniale Staathuishoudkunde.* J. C. Kielstra. What are the distinguishing marks of "colonial economics"?—a detailed review of Mr. van Gelderen's lectures on "Tropical Colonial Economics." The tropical peoples must themselves find the way to direct participation in exchange in the world market. The colonising power and the colonised people render each other economic services. *Moet een Gemeente leenen voor jaarlijks terugkeerende Buitengewone Uitgaven?* G. W. Van der Pot. A continuation of a controversy as to whether a local authority should borrow or pay out of revenue for recurring expenditure to meet the needs of a number of years. The article advocates payment out of revenue. Professor van Gijn replies on the other side in a note attached.

December, 1927. *De financieele verhouding tusschen het Rijk en de Gemeenten.* H. W. C. Bordewijk. A lengthy discussion, with reference to Dutch history and experience, of the relations between national and local finance, occasioned by the recent report of the Dutch Royal Commission on the subject. The distribution of function is the product of history; it has grown and cannot be uprooted. "The commune is so much older than the unified state." *De ontwikkeling der moderne waarde- en prijsleer.* W. L. Falk. An appreciative, but critical, summary and discussion of Dr. van Gelderen's recent book on *The Development of the Theory of Value since* 1870. Dr. van Gelderen is criticised for over-stressing the German and Austrian point of view and under-stressing the contribution of Marshall, Clark and the modern Americans.

January, 1928. *Is vrije Crediet-creatie door banken mogelijk?* W. C. Posthumus Meyjes. The opinion that banks can only grant credit out of what has been entrusted to them is correct from the point of view of the practical man, but from the scientific point

of view it is erroneous. In an analysis of the idea of a bank, Overstone, Gilbart and Conant are quoted; none of these refer to the *creation* of credit as part of the bank's functions. The older definition has become inappropriate, and the modern theory is that banks are not merely brokers and dealers but "producers of money." There is a primary demand for money depending on the rate of discount, and a secondary demand depending on the rise of prices which results from the primary. This would lead to a constantly increasing demand for money, in the absence of any question of a gold cover or a managed currency. The same holds true of credit which operates as a means of circulation. Actual conditions are different: (i) a considerable amount of "chartal money" is in circulation, with the distinguishing feature of being legal tender, *i.e.* a type of money that can be demanded. Experience has taught the banks what proportion of their balance must be held in ready cash for this purpose. (ii) There exist not one bank but several; the loans of Bank A may appear in Banks B or C. (iii) Not every credit is attractive to a bank; there must be assurance of repayment of the capital; there is, therefore, a selection from among those seeking credit. The conclusion is that it is not subject to reasonable doubt that creation of credit by banks is possible and may assume considerable proportions: but it is not "free" in the absolute sense, having regard to the three conditions specified above; but it is relatively free in opposition to the view that a bank can only give credit when it has previously received a corresponding deposit. Recent tendencies in banking (*e.g.* concentration) have increased this freedom.

Giornale degli Economisti (Rome).

SEPTEMBER, 1927. *Ancora sull' offerta del risparmio.* UMBERTO RICCI. A continuation and development of the articles on the pure theory of interest contributed by the author to the *Giornale* in February and March 1926. *L'Albania ed il suo riordinamento monetario.* ADOLFO GULINELLI. Stress is laid on the great part taken by Italian financial and commercial interests in the work of economic reconstruction in Albania. Albania until recently was unique in only possessing a metallic currency (though of many types and origins); it has now been furnished under Italian auspices with a modern bank-note issue based on gold. *Bibliographia economica italiana.* The first of a quarterly series of very brief summaries of periodical literature published in Italian journals on economic subjects.

OCTOBER, 1927. *La composizione raziale della popolazione Americana.* FRANCO SAVORGNAN. *Osservazioni sul commercio fra l'Italia e l'estero nei primi nove mesi del 1927.* GIORGIO MORTARA. The foreign trade figures for Italy during the first nine months of 1927 show that the effects of the partial revaluation and the stabilisation of the currency have been less severe than might reasonably have been anticipated. However, the full effects have not yet been felt as internal costs of production, especially wages, have fallen slower than the general level of prices. *Gli investimenti industriali in regime di svalutazione.* LUIGI FEDERICI. A reply to Signor Motta's criticisms of the article bearing this title which was published in the *Giornale* in June 1927.

NOVEMBER, 1927. *Alcuni confronti internazionali in materia di rivalutazione monetaria.* GIORGIO MORTARA. International experience indicates the enormous difficulties which would have confronted any further revaluation of the Italian currency. No country in circumstances comparable with those of Italy has succeeded in bringing about a revaluation which is relatively greater than that which Italy has achieved. *Le vicende e le ripercussioni della legislazione finanziaria di guerra sull' ordinamento tributario italiano.* F. A. RÉPACI. *Il "Manifold System" in relazione all' economia di personale e all' efficienza di lavoro nell' azienda bancaria.* MARIO PAGANO. A detailed and favourable account of the "Manifold System" initiated in America, whereby much of the routine and documentary work in large banks is carried out by the aid of tabulating machines.

DECEMBER, 1927. *Esperienze monetarie in Cecoslovacchia.* GIUSEPPE BRUGUIER. The monetary history of Czecho-Slovakia since 1918 is summarised in a lengthy and well-documented article. The writer attributes importance to two consequences of the revaluation of the currency: firstly, the preponderant position acquired by the banks over industry; secondly, the weakness of the present position of the National Bank in the money market. *Le autovie nel sistema dei trasporti.* M. R. BUCCELLA. The development of motor transport should be left untrammelled by the State and should not be subsidised, save by the maintenance of good roads and by a reduction of the duty on motor spirit. *Bibliographia economica italiana. Prospettive economiche 1928: vino.* GIORGIO MORTARA. The world output of wine is increasing. In France, Spain and Algeria the output for the years 1923–27 was appreciably greater than for the years 1909–13, though it was smaller in the case of Italy. In Italy 6·4 per cent. of the cultivated land (including forests) is under vines, and the average Italian spends about 8 per cent. of his income on wine. The writer suggests that these proportions are excessive from the point of view both of production and consumption.

La Riforma Sociale (Turin).

SEPTEMBER–OCTOBER, 1927. *Osservazioni sul principio "produttivistico" di un sistema tributario di guerra.* ATTILIO CABIATI. Arguments are advanced on the basis of the productivity theory of taxation in favour of a capital levy for the purposes of war finance. *L'imposta sul celibato nella legislazione italiana.* F. A. REPACI. A critical examination of recent Italian measures for the differential taxation of bachelors. It is contended that these measures have been faulty in so far as—(1) they have been based on other motives than the raising of taxation in accordance with capacity to pay; (2) certain social classes have been exempted, in particular soldiers and priests; (3) the rates are too high in the case of small incomes, the lowest of which should be entirely exempted; (4) exemption is not provided in the case of those suffering from transmissible diseases, such as would make the production of children socially undesirable. *La misura della pressione dell' imposta.* ANTONIO DENI. *La politica commerciale doganale dell' Italia prima della guerra.* GIUSEPPE FRISELLA-VELLA. The commercial policy of Italy before the war is analysed

at some length and criticised severely on the ground of its protectionist tendencies.

NOVEMBER–DECEMBER, 1927. *Cesare Beccaria e la politica agraria.* F. LUZZATTO. An account of the work and influence of an eighteenth-century agrarian reformer. *Un tentativo di " co-operazione integrale " ispirato da un' etica religiosa.* GIOVANNI PIOLI. A description of the interesting but little known social experiment of the Llano colony in Louisiana, which has been in existence since 1914 and is apparently still flourishing. The colony is constituted and administered as a joint-stock company, but with equality of income and common ownership of all means of production. It seeks to develop " practical idealists " whose lives and actions are governed throughout by the Golden Rule. *La riforma agraria in Rumenia e i suoi primi effetti.* ALESSANDRO SCHIAVI. The future of the agrarian reforms in Roumania depends mainly on whether the new small proprietors can by co-operation overcome the economic disadvantages of small holdings. It also remains to be seen whether in the course of time there will set in a new concentration of land ownership in the hands of the richer peasants.

Revista Nacional de Economía (Madrid).

SEPTEMBER–OCTOBER, 1927. *La parte económica de las Constituciones.* E. M. JARA. *La Cuenta general del Estado.* A. G. CEDRÓN. *La expropriación forzosa por utilidad pública.* C. M. RETORTILLO. *La colonización interior y la Acción Social Agraria.* M. FUENTES.

International Labour Review (Geneva).

OCTOBER, 1927. *Social Work and Labour Legislation.* G. A. JOHNSTON. *Fifty Years of Legislation on Occupational Diseases in Switzerland.* W. LAUBER. *Labour Legislation in the French Colonies.* M. BESSON. *The Population Problem and Industrialisation in Japan.* I. F. AYUSAWA.

NOVEMBER, 1927. *Money and Unemployment.* H. FUSS. A plea for an effective regulation of banking policy with a view to stabilisation of general prices, supported by statistical records. *The Medical Aspect of Vocational Guidance, I.* A. STOCKER. *The Application in Germany of the Washington Convention concerning the Employment of Women before and after Childbirth.* H. GOLDSCHMIDT. *Mothers' Allowances in North America.* E. HAULTAIN. *The Trade Union Movement in Bulgaria.* D. NIKOLOFF.

DECEMBER, 1927. *At what moment do the International Labour Conventions become applicable?* J. MORELLET. *Sickness Insurance at the International Labour Conference.* A. TIXIER. *Provision for Prolonged Unemployment in Certain Industrial States.* F. RAGER. An analysis of " extended insurance " or " extraordinary relief " in Germany, Austria, Britain, Russia, Poland, Denmark.

JANUARY, 1928. *The Control of Industrial Combinations from the Social Standpoint.* R. HOFFHERR. The attitude of the law, in England, Germany, America and France toward the policies of combines, in relation especially to labour and the common good. *Minimum Wage Regulation in the United States.* R. BRODA. *Labour Legislation in Latin America.* M. POBLETE-TRONCOSO.

Bulletins of the Bureau of Labour Statistics (Washington).

No. 439. *Handbook of Labour Statistics.*
440. *Wholesale Prices,* 1890 *to* 1926.
441. *Productivity of Labour in the Glass Industry.*
442. *Wages and Hours of Labour in the Iron and Steel Industry,* 1907 *to* 1926.
443. *Wages and Hours of Labour in the Woollen and Worsted Goods Manufacturing,* 1910 *to* 1926.
444. *Decisions of Courts and Opinions affecting Labour,* 1926.
445. *Retail Prices,* 1890 *to* 1926.
446. *Wages and Hours of Labour in the Cotton-Goods Manufacturing,* 1910 *to* 1926.
448. *Trade Agreements,* 1926.
449. *Building Permits in the Principal Cities of the United States in* 1926.
450. *Wages and Hours of Labour in the Boot and Shoe Industry,* 1907 *to* 1926.
452. *Wages and Hours of Labour in the Hosiery and Underwear Industries,* 1907 *to* 1926.
453. *Revised Index-Numbers of Wholesale Prices,* 1923 *to July,* 1927.

NEW BOOKS

British.

ALLEN (G. C.). Modern Japan and its Problems. Allen and Unwin. 8¾″. Pp. 226. 10*s*.

BAKER (P. J. N.). Disarmament and the Coolidge Conference. Hogarth Press. 7″. Pp. 53. 2*s*.

CARR-SAUNDERS (A. M.) and JONES (D. C.). A Survey of the Social Structure of England and Wales, as illustrated by Statistics. Oxford University Press. 8½″. Pp. 246. 10*s*.

CLARE (G.) and CRUMP (N.). The A.B.C. of the Foreign Exchanges. Eighth edition. Macmillan. 7¼″. Pp. 247. 4*s*. 6*d*.

CONROY (J. C.). A History of Railways in Ireland. Longmans. 9″. Pp. 386. 15*s*.

CREW (A.), INFIELD (H.) and AUSTIN (C. G.). A Synopsis of Mercantile Law for Commercial Students and Business Men, with Notes and Statutes. Fourth edition, rewritten and revised. Butterworth and Co. 8½″. Pp. 322. 7*s*. 6*d*.

DALTON (H.). The Peace of Nations. Routledge. 7½″. Pp. 316. 5*s*.

ENFIELD (A. H.). Co-operation: its Problems and Possibilities. Longmans. 6½″. Pp. 90. Cloth 2*s*.

FINLAY (J. C.). Monetary Reform. Auckland: Whitcombe and Tombs. 9¾″. Pp. 32.

HAWTREY (R. G.). Currency and Credit. Third edition. Longmans. 8¾″. Pp. 477. 16*s*.

JACK (D. T.). The Restoration of the European Currencies. King. 8½″. Pp. 218. 10*s*. 6*d*.

KEAY (G. E.). Fire Waste (loss of property by fire), and its Effects on the Economics of National Life in Great Britain. Pitman. 7″. Pp. 59. 2*s*. 6*d*.

KISCH (C. H.) and ELKIN (W. A.). Central Banks: a Study of the Constitutions of Banks of Issue, with an analysis of Representative Charters. Macmillan. $8\frac{3}{4}''$. Pp. 384. 18*s*.

LAYTON (W. T.) and others. Britain's Industrial Future. (Report of the Liberal Industrial Inquiry.) Benn. $8\frac{1}{2}''$. Pp. 503. 2*s*. 6*d*.

MERRALL (H.). The Nation's Ills and their Cure: a Plea for Virility. Manchester: John Heywood. $8\frac{1}{2}''$. Pp. 90. 2*s*. 6*d*.

MUN (T.). England's treasure by forraign trade. (Reprinted from the first edition, and published for the Economic History Society.) Oxford: Blackwell. $8\frac{1}{2}''$. Pp. 88. 3*s*.

NEWMAN (T. W. W.). Public Assistance, its Principles and Practice. Chas. Knight and Co. $7\frac{1}{4}''$. Pp. 28. 7*d*.

NORTHCOTT (C. H.), SHELDON (O.), WARDROPPER (J. W.) and URWICK (L.). Factory Organisation. Pitman. $8\frac{1}{2}''$. Pp. 252. 7*s*. 6*d*.

PEDDIE (J. T.). The Flaw in the Economic System: the Case against the Gold Standard. John Murray. $7\frac{1}{2}''$. Pp. 246. 7*s*. 6*d*.

PIGOU (A. C.). A Study in Public Finance. Macmillan. $8\frac{3}{4}''$. Pp. 323. 16*s*.

POWER (E.). The Industrial Revolution 1750–1850. A select bibliography compiled for the Economic History Society. Oxford: B. H. Blackwell. $8\frac{1}{2}''$. Pp. 39. 6*d*. to members; 1*s*. to non-members.

RAWLINSON (A. W.). Income-tax Reliefs; Law and Practice. Pitman. $8\frac{1}{2}''$. Pp. 406. 20*s*.

SASTRY (K. R. R.). The Madura Saurashtra Community: a Study in Applied Economics. Bangalore: Bangalore Press. $6\frac{1}{2}''$. Pp. 77.

TATTERSALL (F. W.). Frederick W. Tattersall's Cotton Trade Review. 33rd year of publication. No. 353 (December 31, 1927). Manchester: Tattersall. $12\frac{1}{2}''$. Pp. 18.

WEDGWOOD (J. C.). Local Taxation in the British Empire. The Labour Party. $8\frac{3}{4}''$. Pp. 23. 3*d*.

WITHERS (H.). Money. Benn. $7\frac{1}{2}''$. Pp. 80. 6*d*.

American.

ANDERSON (G. B.). The Federal Reserve Check Collection System. Philadelphia: Univ. of Pennsylvania. 9″. Pp. 72.

BOBER (M. M.). Karl Marx's Interpretation of History (Harvard Economic Studies). Harvard Univ. Press. 1927. (London: H. Milford.) $8\frac{3}{4}''$. Pp. 370. 16*s*.

HANSEN (A. H.). Business-cycle Theory, its Development and Present Status. New York: Ginn and Co. $7\frac{1}{2}''$. Pp. 218.

HEXTER (M. B.). Juvenile Employment and Labour Mobility in the Business Cycle. Boston: Massachusetts Child Labour Committee. $7\frac{1}{4}''$. Pp. 111.

LEWIS (C.). The International Accounts: a Constructive Criticism of Methods used in stating the Results of International Trade, Services and Financial Operations. (Institute of Economics Series.) London: G. Allen and Unwin. $7\frac{3}{4}''$. Pp. 170. 10*s*.

LUBIN (I.) and EVERETT (H.). The British Coal Dilemma. (Institute of Economics Series.) London: G. Allen and Unwin. $7\frac{1}{2}''$. Pp. 370. 12*s*. 6*d*.

MILLER (H. E.). Banking Theories in the United States before 1860. (Harvard Economic Studies.) London: Humphrey Milford. 8½″. Pp. 240. 11*s.* 6*d.*

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MESSEDAGLIA (L.). Il mais e la vita rurale italiana. Piacenza: Federazione dei consorzi agrari.

SEGRÈ (A.). Metrologia e circolazione monetaria degli antichi. Bologna: Zanichelli.

ZOLO (C.). Sudamerika. Rome: Sind. It. Art.

Dutch.

KAMPHUISEN (P. W.) and GROTHE VAN SCHELLACH (J. A.). Documentaire Bankcredieten. (Documentary bank credits.) 's-Gravenhage: Martinus Nijhoff. 1927.

VAN POELJE (G. A.). Beginselen van het Nederlandsch Administratief recht. (Principles of Dutch administrative law.) Alphen: N. Samson. 1927.

TROELSTRA (P. J.). Gedenkschriften, I. Wording. (First part of the memoirs of the socialistic leader.) Amsterdam: Em. Querido's Uitgevers Maatschappij. 1927.

VAN VLIET (C. D.). De Amsterdamsche makelaardij. (The Amsterdam brokerage business.) Amsterdam: Drukkerij Mercurius. 1927.

VAN VLIET (C. D.). Het Nederlandsche Hypotheekbankwezen. (The Netherlands system of mortgage banks.) Rotterdam: Nederlandsch-Engelsche Uitgeversmaatschappij. 1927–28.

Vijfentwintig jaren sociale verzekering. (History of twenty-five years of social insurance in the Netherlands.) Haarlem: Tjeenk Willink. 1928.

THE ECONOMIC JOURNAL

JUNE, 1928

THE BUSINESS PROSPECT IN THE UNITED STATES [1]

THE SHADOWS ON THE BUSINESS SUN

THE argument to be presented in the following leads out of the zone of demonstrable statistical fact into the twilight realm of speculative conjecture. The hope is that, by pausing to turn our backs for a short time upon facts about which we may speak with complete assurance and focussing attention upon suppositions and assumptions which rest upon a less secure foundation, a truer understanding of the current and prospective business situation may be achieved.

The problems upon which it may be possible to throw some light are simple to state, but some of them are less easy of solution. Briefly, they are as follows:

Why was the United States so extraordinarily prosperous during the five years 1923-27? Why did the total sum of prosperity decline measurably during the later months of 1927, bringing the volumes of goods that were being produced and distributed to a level well below that which was achieved in 1926 and even in 1923? And why has unemployment become so serious that governmental agencies are investigating, that politicians are shouting aye and nay, and that the newspapers are featuring the bread lines on their front pages? Why, in a word, has there been hunger in the midst of plenty?

The decline in activity is the current fact, and therefore the one that should engage the lion's share of attention. Only so much of the background need be etched into the picture as is necessary to disclose the reasons for the decline.

An Heretical Decline

Naturally, a falling off in business activity at this time would call for scant explanation if it had developed in an orthodoxical

[1] This article, by the editor of the *Standard Trade and Securities Service* of New York, was issued to subscribers to the Service on April 9, 1928. It is here reproduced by permission of the Service.

manner. But, instead, it has been an heretical sag. There would be no difficulty in explaining it by the tried and true old standards if it had been preceded by a sharp break or a steep increase in commodity prices, by a strain in bank credit, by the disclosure of dangerously large inventories, by that vague thing which is called inflation for lack of a better term, by a rapid increase in business insolvencies, or by any of the other generally recognised prophetic signals of economic distress.

But none of these well-known beacons has been lighted. The national stage has been—and indeed still is—all set for prosperity, but instead, prosperity began to wane. It isn't according to recognised principles. No wonder it is puzzling; no wonder the future is becoming increasingly more obscure.

The Standard Statistics Company's explanation of our recent prosperity is so lacking in complexity and prolixity, that it may seem almost childish to those who like to make things difficult. Assuredly it does not justify the elaborate investigations of the numerous European commissions and committees that have visited us during the past few years, to dissect our body economic and to carry the diagnosis back with them across the Atlantic.

We hold merely that the Americans have been more prosperous than the people of most other nations because they have had more goods to distribute among themselves; that the Americans were *relatively* more prosperous in, say, 1927 and 1926 than in earlier years because the secular trend of production has been rising considerably more rapidly than the population curve; that it has been possible for us to increase our physical output at such a rapid rate because of the adequacy of our natural resources; because we have commanded the necessary capital; because we have been developing and applying our stores of technical knowledge at an inordinately rapid pace; and because of the merchandising policies which have been adopted.

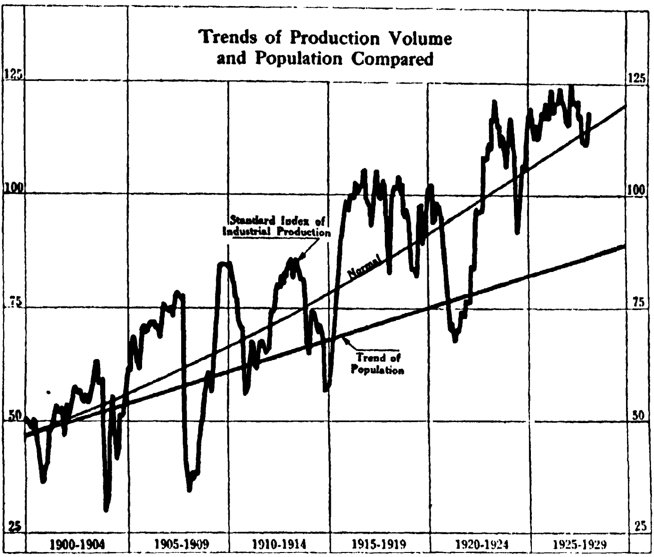
Increase in Production

The first article in this premise, at least, is susceptible of statistical proof. And perhaps also, as the discussion proceeds, other of the articles in the premise may at least be partially substantiated by economic analysis.

The accompanying chart depicts the Standard Statistics Company's index of the volume of industrial production in the United States since 1900. This is not a forecasting nor a barometric curve. It merely reports production facts, in terms of volume. The straight line passing through the production curve

is our mathematical computation of trend, or long term normal. The lower straight line reports the curve of population over the same period, and is charted upon the same scale as the production curve.

The annual average increase in the production normal during the 28-year period 1900–27 has amounted to about 3 per cent. The annual average increase in population throughout the same period has been about $1\frac{1}{2}$ per cent. We have been abnormally prosperous during recent years (except for a brief period in 1924 and since October of last year) because the actual volume of the



product we have had to consume has averaged well above computed normal. Conversely, a period of depression would have been reported by a production curve which would have averaged below normal during the greater part of recent years.

This recent period has been different, in many important respects, from any other period in our economic history. Let us now seek to isolate some of its most distinctive characteristics, hoping therewith both to explain it in some measure, to throw some light upon the recent decline that has occurred, and to lay the basis for forecast. Although not limiting ourselves to any particular time period, we shall mainly have in mind the half decade which has followed the great depression of 1920–22.

Bulwarked by Abundant Bank Credit

Above all else we must remember that throughout this period American business has been working hand-in-hand with a sound banking and credit system. Doubtless we deify our Federal Reserve too abjectly, imputing to it omniscience and magical powers far beyond its real capabilities.

But the fact remains that the system has functioned beautifully during the past few years, that at different times it has expanded and contracted credit rather painlessly, that there have been no recent periods of real credit strain, that all of the money and all of the bank credit which legitimate business either needed or desired has been continuously available, and at rates which imposed no financial penalty.

Probably the story would have been different had our supply of gold not been steadily increasing to the point of redundancy. But it is still true that we *have* had an ample supply of cash and credit capital, favourable credit conditions, and an absence of credit strain. We could not have been so prosperous otherwise.

Effects of the Low-Inventory Policy

Of no less importance is the fact that business has been developing a new inventory policy—a low-inventory policy. This is such a well-known fact that it calls for no proof and scant analysis. But it has countless ramifications, some of which we may note in passing.

It goes without saying that one reason why prosperity has endured is because at no time during recent years has there been an unmanageable mass of inventory overhanging the markets. A few lines have at various times developed stocks of goods that were much too heavy, and have therewith promptly surrendered their prosperity for the time being. But the majority of lines have consistently remained on a low-inventory basis, and have for that very reason avoided serious marketing difficulties.

Yet the light inventory policy is unyieldingly intertwined with a great number of residuary and corollary policies. To name only a few of the most important:

(1) Habitual low stocks must inevitably mean manufacturing over-capacity—perhaps gross over-capacity in many cases.

No one ever made any sizeable profits or cemented any volume of customer good-will by turning away orders. The big manufacturing concern especially, not only as a means of holding its old customers, but likewise as a bait for the prospective ones,

must be able to supply all of the goods that are wanted *as* they are wanted. There are two principal ways by which this end may be achieved: either by carrying ample stocks, or by possessing a supple productive mechanism which can be accelerated very quickly when occasion requires. American business has for the time being apparently elected the latter course. Instead of carrying stocks to absorb peak loads, it carries excess manufacturing equipment for that purpose.

(2) Excess manufacturing equipment, in turn, creates another problem. Equipment costs money. Once purchased, the less it disgorges the more it costs, and conversely the more it disgorges, the less it costs. No manufacturer is gratified when his fine equipment sinks to the lowly status of the old grey mare out in the barn, standing there eating her head off. So he tries to stimulate demand through merchandising policies—anything to keep the steel monsters busy. The result is volume production, the ramming of goods down consumers' throats (whether or no), usually falling prices, and always a tendency towards increasing the total volume of goods which society will have to divide among its various members.

(3) But the big volume policy is at certain times more of a beautiful ideal than a practical achievement. During recent years it has been successful more often than not, as the production index reports, but there come times, now and then, when consumption falters and quakes under the strain that is being placed upon it. Mild cases of indigestion ensue—sometimes in this line, sometimes in that one, sometimes in the majority of lines coincidentally. A diet of milk and raw eggs becomes temporarily necessary, with the roast beef and the fancy desserts banished for a while.

(4) At the same time, it must be obvious that the low stock and big capacity policy, subject as it is to varying degrees of success at various times, must likewise mean dealing somewhat ruthlessly with labour. In the golden age of American industry—and everyone understands that any age except the immediate present is the golden age—the ideal was to level out seasonal and cyclical peaks by producing for stock when things were quiet. An even *tempo* of operation was the end which was sought.

All of that is gone with the low stock policy. Labour must go and come as demand rises and falls. Some means will always be found for keeping the most skilful workmen busy most of the time, but a greater marginal supply that we were formerly accustomed to in times of prosperity must constantly be in a state of flux—

working one month, standing on the street corner the next (figuratively speaking).

One of the most shocking things in American business to-day is a visit to Detroit or Akron when the automobile, the automobile accessories and the tyre industries are coincidently in one of the recurrent doldrums. No less shocking is the fact that, apparently, tens of thousands of workers have come to accept this kaleidoscope laying off and laying on as inevitable, as an integral part of the present-day scheme of things, and as something about which nothing can be done.

(5) The low stock and big capacity system has made it feasible to dispense with the services of many jobbers, distributors and wholesalers. One of the chief former functions of the middleman was to carry stocks. Those who have been so displaced have been obliged to otherwise engage themselves (if possible).

(6) The same policies have reduced the fluid working capital that business requires, but doubtless have increased fixed or total overhead charges, although, of course, have not increased *unit* overhead costs. There is some basis for the assumption that the reduction in necessary business working capital may, to a certain extent, have helped to finance the increase in physical capacity which has been achieved.

It may be well to point out that the low stock policy has not yet had its test by fire. As will be shown later, it has been prosecuted during a period when the major trend of commodity prices has been downward. No one knows whether the policy would endure on a rapidly rising price curve, when earnings would be increasing as the volume of stocks increased. The potentialities are not pleasant to contemplate. With industry's current capacity and efficiency, if a wave of rising prices should dictate the wisdom of greatly increasing the size of inventories, we *could* have stacked up, in a relatively short time, a mass of goods more menacing even than came into sight when the post-war boom collapsed.

Problems of Production and Selling

We may now leave the problems of inventories and their numerous ramifications for the time being, and turn to a few of the other recently matured aspects of our current business structure. Business is conducted for profit. When a corporation finishes its quest for profit it liquidates; when an individual becomes no longer interested in gain he turns philanthropist. It is an a priori assumption that every business concern exists

primarily for the purpose of winning profits, and more profits, and still more profits.

Speaking by and large and unromantically, therefore, every basic business fact must always be geared, some way, somehow, to the profit incentive. Few business concerns are satisfied with stable profits; most wish expanding profits; none is humiliated or oppressed by a shameful sense of sin when the expansion is rapid.

There are many royal highways to the Arcadia of enlarged business profits. Among the most classical types of effort in this direction is the attempt to increase the volume of goods produced or handled; or to accelerate rapidity of turn-over; or to increase selling price and therewith take the differential out of the consumer's hide. The latter line of endeavour reached its zenith in this country with the hour before the dawn of the trust-busting era. Failing achievement along any of these simple routes, a reduction in costs becomes effective.

It is our judgment, quite unsupported by statistical demonstration, that next to the constant scramble for greater volume American business during the past five years has devoted more attention to cost reduction than to any other factor in the profits equation. There are likewise grounds for the assumption that greater headway has been made in this direction during recent years than in any preceding period of similar extent in American economic history.

The Fight Against Costs

In most cases it has been impossible to permanently increase selling prices. Over-capacity and the unremitting endeavour to make that capacity disgorge as great a volume of goods as the markets can be bludgeoned into swallowing, are not consistent with run-away commodity prices. So we have witnessed the phenomenal spectacle—unbelievable a few years ago—of rising prosperity on a generally declining price level. Indeed, paradoxical as it may seem, falling prices have given one of the evidences of our prosperity.

Costs are the natural and the eternal enemy of profits. They become all the more diabolical and iniquitous when commodity prices are sagging. By necessity as well as by choice, business has been forced during recent years to wage an unremitting battle to get costs lower.

Business has not cut selling costs—indeed, it appears to have generally increased them, and in some lines to have increased them at such a rate that grave doubts are being raised.

Modern competition not only comprehends the struggle for consumer preference, but it comprehends cost competition as well. Market price more or less takes care of itself; the individual producer or distributor, operating in a free market, can do little or nothing about the price at which his goods will sell. Thus a Firestone tyre of a specific size, containing a given amount of rubber and cotton, sells on about the same price basis as a Goodyear or a Fisk or a Seiberling tyre. Ward's 11-ounce loaf of bread sells at the same price as Cushman's 11-ounce loaf. General Electric Company's dynamos, of given size and delivering a certain standard of performance, sell for about the same as those of Westinghouse. All of this is essential in conditions of true competition.

Low Costs—Wide Margins

It goes without saying, then, that in any competitive market—and the average American market is really a competitive one—the business establishment that will enjoy the widest margin will be the one which enjoys the lowest costs.

Modern business worships its machines—and the term is here used in its generic sense, as a name for any type of mechanical apparatus that replaces work done by the human hand, rather than in its strictly technical sense. The efficiency of the machines themselves, the intelligence with which they are operated and arranged, will often have the final word to say in a given industrial concern's annual profits.

The president of one of the largest specialty manufacturing concerns in the country a few weeks ago told us that machine replacement constituted the largest single element in his operating costs. He asserted that, in theory at least, his company would retool its entire establishment over-night if it could be demonstrated that it could materially reduce long-term costs by so doing. Many times in recent years, he said, it had been found feasible to scrap machine equipment which was less than a year old.

The Machine Tradition

Now the best of all machines, in the traditions of a profits economy, are those that will produce the greatest volume of product with the least amount of labour. Visualise, for a moment, a mechanism which requires ten operators, and turns out, say, 1,000 units per day. Obviously, it would be good business policy to replace that piece of equipment with a faster one which would turn out, say, 2,000 units a day. Or it would be similarly wise

to replace the old machine with a new one which, although it would continue to turn out only 1,000 units a day, could be operated by five men instead of ten. But most handsomely of all it would pay to replace the existing ten-man-1,000 unit equipment with a five-man-2,000 unit one.

Here we have touched upon one of the most vital facts in our present economic structure; one which is so plainly beneath our noses that its importance is often overlooked.

The steady increase in the effectiveness of our mechanical equipment, of course, has to no small degree been responsible for the expansion in the total volume of our product. But at the same time there is ground for the belief that this same fact has likewise been partially—although by no means wholly—responsible for the unemployment which now exists. If a more efficient machine does not actually result in a reduction of labourers in the XYZ Corporation's shop, it is quite likely to result in displacement of workers in the ABC Corporation's shop, assuming that the latter concern directly competes with the former.

Displacement of Workers

Those workers who can retain their jobs as science makes industry more efficient are happier, economically, than ever before. Their employers can afford to pay them higher wages, and with total output increasing while prices tend mainly downward, their purchasing power rises correspondingly.

Some of the workers who lose their jobs in the efficiency shuffle are absorbed in new or in other growing industries. But the transition period is always painful and, sometimes, over short periods, it becomes tragic. In the long run there is no escape from the conclusion that society is greatly benefited by lower industrial costs and accelerating industrial efficiency. But in the short-term view our brilliant technical achievements appear to be developing some of the gentle cannibalistic traits of Frankenstein's monster.

An Era of New Inventions

The reduction in costs by competition among machines is all part and parcel of the fact that in the present business era our technicians are more numerous, more effective, possess a greater body of knowledge and are applying that knowledge more successfully than in any preceding era. This is an age of matchless marvels in discovery and invention. During a single week recently one read in the news columns of the *New York Times* accounts of Bill, the mechanical man invented by a scientist at

the Westinghouse Co.; of a new motor said to develop power from the force of gravity; of a process for transmitting power by wireless; of further developments in televox and television; and of a device by which motion pictures can be taken at the rate of 20.000 per minute.

One captain of industry tells us that his staff sees scores of inventors every day; 99 per cent. of them are cranks and nuisances, but they must all be seen, so that the 1 per cent. with a valid idea can be negotiated with.

The Army of Engineers

This is an age of engineers. Our colleges keep pouring them out by the thousands every June—mechanical and electrical engineers, hydraulic engineers, irrigation engineers, chemical engineers, efficiency engineers, production engineers, and so on down the long, long line. The bounteousness of the supply is attested by the wages at which the engineers begin their careers. Successful corporations can afford to have them in droves, and once in the industrial legion, their progress from privates to corporals to sergeants to lieutenants and so on up to major-generals in the army that has been enlisted to battle with costs becomes merely a matter of their individual capabilities.

American society owes much to its colleges, but for our *material* happiness we probably owe more to our engineering colleges and departments of chemistry than to any other branch. This is not to say that engineers and chemists have become as important as sales managers in our profits economy, because sales manager aces who can really move the goods are probably much more scarce than expert scientists.

But it is evident that the scientist is one of the keystones in our current business structure; that his work is not only to create new things but to devise means of making the old things more cheaply; that the corporation which pays him his salary must measure his usefulness on this utilitarian basis, nine times out of ten, and that if he is really useful (in the corporate view) his achievements must not only bring about profound readjustments from time to time, but must likewise be constantly occasioning pain to those whose services or products may be dispensed with as transition from one cost level to another occurs.

Selling Methods

Reference to the functions of the sales manager in the foregoing suggests another essential characterisation of our current

business structure. This is an age of expert, scientific merchandising. Any corporation which produces or handles consumers' goods, if it can command the right type of merchandising brains, and if it has the ability and the courage to throw enough money into the breach, stands a very good chance of success in forcing the American consumer to buy its product in volume.

Old Gold cigarettes constituted last year's best example. An old line tobacco company found that it did not possess a best seller. It now has a best seller. Merchandising did the business, and that statement does not disparage the merits of the product.

A year earlier there occurred an even more brilliant merchandising achievement. A certain proprietary medicine company producing a compound which was being principally used as a gargle, made the revolutionary discovery that this same product helped both dandruff and halitosis. Sales volume therewith measurably increased.

These are only two examples of the thing that we call successful merchandising. Hundreds of others could be cited. The point is this: modern merchandising efforts achieve something more than the creation of the desire for a product; they can, indeed, force consumers in vast numbers to *purchase* the product.

Costs of the New Methods

There are those who, defending present high sale costs, say that this has been one of the factors in extending the total volume of our physical product. Perhaps they are not far from the truth.

Many business men of the more conservative school look askance at the wasteful methods of distribution which are developing—and at the apparent success of these methods. The truth is that the experiment has not yet had a conclusive trial. Before condemning it we should watch further. The only basic economic question is whether the creation of irrepressible desires by costly selling programmes contributes in the long run to the general economic welfare; there is no question whatsoever but that up-to-the-minute merchandising has contributed enormously to the profits of certain individual corporations.

In either case, high-pressure selling is a current business fact which must fit into all of our analyses. We cannot lose sight of the truth that by scientific selling people can be *made* to desire and to buy certain kinds of goods, making payments from past, current or future incomes as the case may be, and that the total sum of the product which we exchange among ourselves may have been profoundly affected thereby.

Not Applicable to All Lines

Steam valve merchandising is not a general but a specific fact. It is applicable to virtually all types of consumers' goods, and to certain types of producers' goods, but not to raw materials.

All of those who produce or handle goods to which it is applicable do not employ it. All who try it do not employ it successfully. Varying degrees of success in big-scale merchandising programmes, therefore, create great irregularities in the prosperity of different corporations; create rapid and artificial shifts in demand which bring not only triumph to some but hardship to others.

Raw material producers, of course, are greatly at a disadvantage in a programme of strong-arm merchandising. Stimulation of buyers' preference for a given good mainly means brand specification. You may be quite certain that you want a General Motors automobile, but you do not care a fig whether the United States Steel Corporation or the Bethlehem Steel Corporation rolls the sheets for the body and fenders.

The Meaning of Abundant Capital

Bearing upon all of the foregoing has been the abundance not only of banking capital, but of privately controlled capital. The personal consumptive habits of those who derive large profits from business enterprise are, after all, rather closely limited. Even the number of steam yachts and Rolls Royces and country estates and pairs of silk underwear which a given individual can enjoy are *relatively* few. Somehow, some way, the lion's share of the profit which business returns in any given year gets back into business itself, for the simple reason that there is not much else to do with this surplus.

Competition of Capital

So we have another kind of competition—competition of capital. This type of competition always asserts itself most conspicuously in the security markets. If it doesn't appear feasible to start a new factory or a new store, you can always buy an interest in an existing factory or store from someone else. You buy, of course, at rising prices in a period of prosperity—indeed, the rising security prices themselves are to no small degree predicated upon the eagerness of A to buy B's interest in what appears to be a good proposition.

So successful business concerns have become enormously high priced. A simple computation which we recently made reveals

that the total market value of the outstanding securities of twelve leading industrial concerns amounted to 4·2 billions at the beginning of 1923 and to 5·0 billions at the beginning of 1925, as compared with 10·6 billions at the present time. Thus current valuation of the securities of these twelve conspicuously large corporations is respectively 155 and 113 per cent. greater than at the beginning of 1923 and 1925.

Lower Return on Capital

The owners of industry are, of course, finding themselves, under prevailing conditions, obliged to accept a lower return upon their capital than in former years. There is, we believe, a fundamental tendency in this direction, and this tendency is likely to be further accentuated over a period of time. That is one of the reasons why the Standard Statistics Company is optimistic as to the long-term outlook for the prices of high-grade bonds and high-grade preferred stocks. We believe the *high-grade* investment security structure to be now upon a permanently higher level, which will not be greatly lowered unless thoroughly unsatisfactory conditions in the money market eventuate.

Putting Profits Back into Business

Surplus funds compete not only for the ownership of business enterprise, but in the *extension* of enterprise. But in this field of competition it is the *undivided* surplus which is the most potent force—and by undivided surplus is meant that portion of a corporation's profits which is retained in the business rather than disbursed to security owners.

For large and successful corporations taken as a group, we estimate that in a year of normal prosperity from 35-40 per cent. of net profits are withheld from bond and stock holders to be reinvested in the business itself. Several past years of adequate profits have made this annual sum which is withheld bulk very large, both actually and relatively. It has been an item of transcending importance in extending the capacity and the effectiveness of our business mechanism, and of developing it further.

There is one school of economic thought which holds that one of the principal factors in bringing any period of prosperity to a close is the tendency to over-capitalise business—that is, to invest such great sums in capital goods that the resultant flow of consumer goods must ultimately become too great for the markets to carry. Remember, however, that this premise was framed before the era of high-pressure salesmanship. While no cautious

person cares to risk the penalities of flatly disputing it, it must be confessed that, in the light of our knowledge of the present scheme of things, the theory must be re-examined with at least a mild leaning towards scepticism.

The Size of Profits

In the preceding, reference has been made in several instances to the fact that business profits have been adequate in many cases during recent years. Perhaps one will demand just a little proof along with the statement of the fact. There is not space here available to demonstrate the proposition in all its varied aspects, but there is one short cut which will at least suggest the underlying truth.

Corporate profits are most frequently reported to the investment public in terms of earnings per share of common stock. And as is well known, many business concerns do not like to appear to be earning too much, so they have a sly habit of befogging the situation by stock dividends, stock splits, changes in par value of stock, etc.

Some time ago the Standard Statistics Company began a series of computations designed to show what a number of conspicuously successful industrial corporations would actually be earning per common share at the present time if the common stock unit had remained the same since the year which witnessed the beginning of the Great War (1914).

We are not yet ready to make a complete report. But a few preliminary computations are available. These show that, if the unit value of the common shares of the following corporations had not been changed from one to half a dozen times during the past fourteen years through stock dividends, splits, etc., 1927 earnings per common share ($100) would have been reported in these terms:

	1927 Earnings per 1914 Shares.
Case Threshing Machine	$37
United Fruit	41
South Porto Rico Sugar	45
Sears, Roebuck	63
Woolworth	71
Firestone Tyre	339
Nash Motors	415 [1]
General Motors	551

[1] At least $415. Company was organised in 1916.

The Increase in Equity

These figures, of course, do not report the growth in the profits of business in the aggregate during the past fourteen years, because they are for concerns which have been especially successful rather than for the average corporation. But they do serve to illustrate, even though perhaps in exaggerated terms, the principle here under consideration.

Successful corporations have increased their profits so spectacularly because of the growth in their equities. By consistently ploughing a certain percentage of profits back into the business, it has been possible to greatly increase capacities for production or distribution, therewith making profits yield still greater profits.

But note that the increase in equity is fundamental to the conception. A given business, to make its profits produce still greater profits, must either increase the volume of goods that it handles or decrease its unit costs. The increase in volume can to a certain extent be absorbed by a rising standard of living; often, however, a portion of the increase comes at the expense of someone else. If the increase in profit comes solely by decreased unit cost, here again someone more often than not must pay the piper. In any event, the growth of the profits of large and successful corporations almost always dictates certain readjustments as between all corporations competing for the same market, and must therefore usually have a painful as well as a constructive aspect.

Certain other essential developments which have had an important bearing upon the level and the trend of our prosperity curve during the recent past may be cited very briefly, without the necessity for extended collateral analysis.

Era of Consolidations

We are in an era of business consolidations. Occasionally, of course, only the bankers who float the securities profit by consolidations. But in virtually all cases the original intention of the industrial parties to the consolidation is an increase in aggregate profit by a decrease in aggregate costs. This usually means a reduction in the total number of workers employed after the consolidation has been accomplished. Often it means increasing mortality among the small competing concerns which cannot successfully compete on a cost basis with "big business."

The chain store movement is only another aspect of the con-

solidation movement. The chain stores do not absorb existing stores so much as they establish new competing units. The net result is the same: rising mortality among the less efficient retailers, which is fine for society because it reduces retailing costs and presumably retail prices, but hard on the inefficient retailers.

New Industries

We are in an era which is experiencing both the birth and development of many new industries, and rapid shifts in the old ones. Creation of a demand for radios at first diminished the demand for victrolas and pianos, just as the earlier creation of the demand for victrolas and piano-players had diminished the demand for piano lessons. The billions of dollars that we now spend annually for new automobiles, for automotive repairs, replacements, fuel and garages, provide several million workers with the means of livelihood and several thousand corporations with excellent net incomes; but beyond any doubt this new and growing field of expenditure represses our demand for the products of certain other industries. Good for the automobile people, but as bad for the corn and horse growers as bobbed hair is bad for the hairpin people.

As a further example, a new type of textile industry has been developing in the South, probably more scientifically located than the New England textile industry, and likewise probably more efficient. Good for the South; bad for New England.

We have had a constant fight against fuel costs, taking the form of greater efficiency in fuel utilisation, accompanied by a decreasing volume of demand for certain types of fuel. On top of this there has been chronic over-production of the fuel that was needed. Fine for the consumers of fuel; not so good for the producers.

Summary and Outlook

Need one extend the category further? The heart of the whole matter is this: The trend of aggregate production in this country is more rapidly upward than is the trend of population. This means a rising trend of material happiness, for the simple reason that it means a greater aggregate physical product to divide among ourselves.

But the slope of the production curve is not uniform in all lines of business. There has been a rapidly rising trend in some lines, a more slowly rising trend in others, a horizontal trend in still others, and in some cases even a declining trend. These, in

conjunction with other factors, have necessitated grave readjustments as between various lines.

The torrent of new inventions, the success of the scientists in reducing costs, have likewise occasioned not only readjustments as between various industries, but as between employers and workers, and as between individual competitive corporations in the same line.

Is there any wonder, then, that from time to time the *tempo* of general business activity, under such complex conditions, becomes discordant? There should not be. The marvel is that when things get out of joint the effects are not even more serious than they actually have proved to be in recent years.

Necessity for Broad Readjustments

The Standard Statistics Company believes that to a considerable extent the decline which occurred in general business activity last year was stimulated by the fact that necessary readjustments in a swiftly changing business order have slowly become cumulative, and have asserted themselves with particular violence at this particular time. The drop has been accentuated by other developments of a temporary and transient nature (floods, strikes, etc.), and of course many other factors which could not even be suggested here also have been contributory.

But we believe it probable that the most influential *single* factor has been the *cumulative* effects of some of the basic developments which have been alluded to in the foregoing.

We come, then, to the forecast.

This country is rich beyond the wildest dreams of any other people that has inhabited our planet. It has become astoundingly prolific, mechanically. It has been building up a vast store of technical knowledge as the fecundity of its mechanical equipment has increased, and is each year training more and more technicians both to apply this knowledge to material things and to increase still further the common store of technical knowledge.

Barring a money stringency, barring inflation in bank credit or commodity prices, barring an unexpected national disaster such as a great war or a general crop failure, we see no reason why our people should not go on, over a period of years, increasing the volume of their product more rapidly than their own numbers, and therefore increasing the total sum of their material welfare.

This means that we regard the recent decline in activity as in the main a temporary one—a rather violent ripple across an established trend line, but one which should be later succeeded by

a corrective rise in the business curve. There is nothing at all in the basic determinants of business which validates the assumption that the recent decline in activity marks the initial stages of a period of real depression. Such readjustments as a changing business structure have necessitated in the past have always been made, in the fullness of time, and there is no reason to assume that they will not be made in the future.

The current period of indigestion may be more prolonged than other similar ones during the past few years have been. Business may be mainly quiet for a number of months to come, and may or may not sag off somewhat farther later on this year. But we hold that business cannot become seriously depressed so long as our credit situation remains as strong as it now is, and that, granting a continuance of this favourable credit condition, it is a question of months rather than years until the corrective up-swing announces itself.

The only danger point of immediate importance which we can discern is the speculative situation; the props beneath the speculative price structure appear to be steadily growing less secure.

LAURENCE H. SLOAN

THE LIBERAL INDUSTRIAL REPORT [1]

THE short-lived Ministry of Reconstruction, and the movement of which it was the official embodiment, was an illuminating episode in the relations of State and industry. Its objects were so wide and its achievements so small. There seemed ample justification for its creation; the war had involved great changes, and the return to peace would involve changes equally great; society was plastic, and the war experience seemed to prove that Government had the power to mould it. Yet little or nothing was achieved; on the contrary, an uncontrolled frenzy of speculation and profit-making was succeeded by an unprecedented depression, which Government did little to prevent or mitigate. It was not for want of proposals that reconstruction was held up; the variety and range of schemes put forward was the difficulty. It was the lack of driving force for any programme. There were only two sources from which such driving force might have come. One was the Government of the day, which, with the most benevolent intentions, was more than fully occupied in negotiating a peace treaty and adjusting the relations of this country with the rest of a disturbed world; the other was an instructed and widespread public opinion, that might have directed to possible projects such attention as Government could spare for domestic reconstruction. For the latter to be created inquiry was essential, and the necessary inquiry had not been made. No authoritative commission or committee had attempted a survey in the detail that reveals urgent and practicable reforms. With the depression the need of such inquiry was gradually realised, and much has been done; it is hard to believe that Government policy would not have been different if the reports of the Colwyn and Balfour Committees, the Agricultural Tribunal and the Samuel Commission had been completed and co-ordinated, say, by the beginning of 1923. As it is, the first serious attempt to survey the position and needs of British industry after the war as a whole is the work of a private and unofficial body, and appears in the tenth year after the war ended.

A report that bears a party label is inevitably suspect. There

[1] *Britain's Industrial Future, being the Report of the Liberal Industrial Inquiry* Ernest Benn, Ltd., London, 2*s*. 6*d*. net).

is very little to justify such suspicion in the present report. The survey of facts is, within its limits of space, as thorough and impartial as that of any of the official inquiries I have mentioned; politically it could have been made much more effective if it had been less scientific. The conclusions and proposals arise logically from the survey; they equally would have gained in electioneering appeal if they had been confined less severely to what is possible without any breach in the orderly development of industrial society. The report is much better reading than most blue-books. Although it is a composite production, it bears few marks of compromise, reveals few concessions to particular interests. It has taken a wide reference and attempted to lay down the lines of policy for a generation, without the texture of its argument and documentation ever wearing thin. The nearest parallel to it among modern inquiries is perhaps the minority report of the Poor Law Commission of 1909; like that, whatever its influence on policy, it puts the discussion of certain big problems on a new plane, and provides a new starting-point for debate.

A formal answer to the allegation of partisanship is suggested by the reception of the report. The spokesmen of the Labour Party accused it of plagiarising their policy; the Conservative Press represented it as a collection of commonplaces on which everyone was agreed. This unanimity on the broad outlines of economic reform has a significance to which I will refer later; but this prompt and whole-hearted acceptance of the report did not probably survive the reading of it.

The inquiry falls into four main parts: a survey and criticism of the direction and organisation of British industry; a study of the problem of industrial relations; a programme of national economic development directed to relieving the special problem of unemployment due to the war; and a criticism of national finance. A short introductory statement attempts to differentiate (without striking success) the Liberal standpoint from that of the respectable elements in the other parties; there is a skilful and very readable summary of conclusions in 36 pages at the end. The scale of treatment can be gauged from the length of the volume—about 200,000 words, including 41 tables. Exposition and criticism of its contents might—and probably will—occupy many times its own space; here all that can be attempted is to indicate the more novel and important conclusions and point out certain qualifications and criticisms that they suggest.

The first two books deal respectively with The Condition of British Industry and The Organisation of Business. The dis-

tinction between them is, however, not so much that one is a survey of fact and the other a series of proposals, as that the first deals with the direction and results of industry and the second with its structure. There are signs in the treatment of the former either of differences within the committee or of the necessities of a third party, concerned to define its position against parties of the left and the right. At one time the achievements of industry as conducted in the nineteenth century are stressed to confute revolutionary critics, at another its failure to meet the needs of the twentieth century are urged against Conservatives. The final position is, however, logical enough—that no revolutionary change is called for, but that a change has taken place in the last generation: the material progress of the nineteenth century has not been maintained, there has been a growth of discontent, British industry has seen its supremacy challenged, and a considerable re-orientation of industry is necessary. The features of the post-war situation stressed are, first, that the depression is not due solely to the war, but is the outcome of tendencies apparent before the war; that it is not general, but concentrated on the great export industries, which are conservative in their methods and deprived of many of the comparative advantages that explained their former predominance in British economy; other exports are not supplying their place, so that the present export of capital is carried on by borrowing short and lending long—a dangerous procedure. Recovery, therefore, must be looked for at home rather than abroad, and must be stimulated by "a bolder programme of home development which will absorb and employ the natural resources of capital and labour in new ways." The importance of doing everything possible to assist the great export trades, both by relieving them of unfair burdens at home and by active co-operation in the policy of removing trade barriers abroad, is given full recognition; but the net result of the survey is to make a case for a programme of national development such as is set forth in Book IV.

While this is the general trend of the discussion, the actual content is an admirable collection of statistical material, illuminated by many penetrating and epigrammatic comments, which has a value for readers who will not accept the general conclusion. The criticism that suggests itself is that inadequate allowance is made for the effects of the war. In consequence the contrast between nineteenth-century progress and twentieth-century stagnation is overdrawn; the achievement of industry in general, and the prospects of particular industries, are misconceived.

"In contrast with the progress of the nineteenth century," we are told, the maintenance of real income at about the pre-war level "must be counted a poor achievement after fifteen years of startling scientific advance"; this in spite of a 10 per cent. reduction of hours and an extra 5 per cent. of unemployment. It is a matter of opinion, but, in view of the direct cost of the war and the greater indirect cost due to dislocation of trade, such an achievement might be regarded as remarkable. The contrast with America is beside the point, because America was hardly in the war; comparison with Russia or Germany would have been more relevant. It is true that most of the effects of the war were by way of exaggerating pre-war tendencies; but before the war British industry, including the export industries, was able to adjust itself to these tendencies without difficulty. Whether it will be able to do so again depends on the world's recovery from the war; but it is arguable that the newer industries that have expanded since the war offer no substitute. The report was obviously influenced by the prosperity of these newer industries. "There is not to-day, and there has not been for several years, a general trade depression"; this in spite of an unemployment percentage of over nine among males, when the great export trades have been excluded. No allowance seems to have been made in assessing achievements and prospects for the burdens that handicap the export trades or the favours that the newer industries have received. The burden of rates and unemployment relief are emphasised and their removal recommended; but it is not apparently realised that their differential pressure may help to explain the differential depression in these industries. On the other hand, the part played by selective protection and subsidies in the expansion of the prosperous industries is almost ignored. The explanation of the contrast is of importance, since the policy of national development is dictated to some extent by the assumed decline of the staple pre-war industries.

The examination of the organisation of industry is penetrating, original and constructive. It would be useless to attempt a summary of it; it is too compact and too important. By its detailed and statistical demonstration of the actual structure of industry, it reveals needs and possibilities that previous controversy has ignored, and puts the discussion of the relation of State and industry on a new plane. It wastes no time in abstract debate over the merits of Individualism and Socialism; but sets forth the actual extent of public operations of industry, and by so doing directs attention to the real problem that society has

to face—the constitution and conditions necessary to secure efficiency in the Public Concern. The figures of capitalisation given point to something like two-thirds of the capital in large-scale undertakings being already under some form of public control, either direct, as in the case of the Post Office or municipal tramways, or under special legislation, as in the case of the railways or the Co-operative Movement. The "natural line of evolution" is the creation of *ad hoc* statutory bodies for all this class of undertakings, paying a fixed rate of interest to the shareholders for their capital, and vesting control in a directorate constituted according to the needs of the service performed. Equally original and important is the demonstration of the quasi-public character that large joint stock companies have assumed even outside the field of public utilities, and the consequent proposals for the special regulation of companies, above a certain size, which have either passed out of the effective control of shareholders through the wide diffusion of ownership or have attained something of a monopoly position. The proposals are directed to securing greater publicity of accounts, and more expert boards of directors. The tendency to monopolistic combination is welcomed, on condition that the Board of Trade is given power to investigate and publish the doings of monopolists.

The analysis of the structure of large-scale industry is supplemented by a statistical survey of the national savings and their disposition. Again the result is to reveal an unsuspectedly large proportion already under public control of one sort or another. As in the case of joint stock companies, proposals for an extension of Government action are confined to a limited and obviously practical suggestion; in effect, that the control at present exercised over the direction of new capital should be unified and canalised through a Board of National Investment. However sweeping some of their more epigrammatic criticisms of present arrangements may be, the committee's attitude to actual change is sober and responsible enough to satisfy even the City editors. They are always content to let well alone, and are radical only in an unwillingness to ignore and let alone what is not well, however respectable it may be. For the further ordering of business, they propose a similar unification or co-ordination of official inquiries into economic conditions by an Economic General Staff, and they rely for the elimination of much unnecessary uncertainty and inefficiency, not to add dishonesty, on more adequate official statistics, more regular and prompt publication of them, and an improvement towards, if not up to, the American level

of unofficial business statistics. There is an interesting discussion of the recruiting of the higher ranks of industry, and a clear statement of a deficiency in private industry in the lack of any organ that can examine the affairs of an industry as a whole.

Taken as a whole this Book II is the most illuminating discussion of the relations of State and industry that has appeared in this generation. It deserves this description, because it analyses more clearly than any other I know the existing relation, and because its proposals are organic and designed to secure the desired development with least shock. If only the reading of it could be made compulsory, we might never hear the blessed word "Nationalisation" again. There are one or two points that invite question or comment, without, however, affecting the argument. It is less than fair to English Socialists to describe "the divorce between responsibility and ownership worked out by the growth and development of joint stock companies" as "an event which has occurred since the dogmatic ideas of Socialists took place." That divorce is the basis of English Socialist theory and propaganda, which have never owed much to Marx, and is the standard answer which Socialists have been in the habit of giving to the ordinary Liberal business man's talk about incentive for the last five-and-twenty years to my personal knowledge. Equally inept is the reference on the same page (100) to "the hand of the State (which has slipped in much more often than either theorists or the public have recognised)"; D. G. Ritchie, Dicey, the Webbs, to mention no others, all detected it a generation ago. The discussion of trade combinations and monopoly would have been more useful if the committee, which has published an admirable study of the legal position of trade unionism, had dealt similarly with the law of combination and restraint of trade. The difference in the law would seem to be the chief explanation of the differing development of the combination movement in Germany and England. Another reference that needs developing is the unfavourable comparison of English marketing methods with German: it is hardly borne out by the table of percentages on p. 25 of the world's foreign trade secured by them respectively.

The second main subject of the report is the problem of Industrial Relations. There is, perhaps, less scope for originality here; but the treatment shows how much of new and useful constructive proposals will emerge from a thorough and systematic examination of the data of the problem. No panacea can be found; but it is something to show that no panacea can be found.

The discussion lays itself open to the criticism that it states the problem in exaggerated terms. "The State," we are told, "cannot look on indifferently while civil war wages between organised bodies of its citizens." Is not the metaphor of war a dangerous and misleading exaggeration? No one would describe as an act of civil war the decision of a price association to refuse to sell below a minimum price-list; why should it be war, when the members of the association are wage-earners and the price at issue a wage-rate? In fact, is not the State forced to "look on," for the same reasons that it abstains generally from fixing prices? The recent increase in the scale and cost of disputes is attributed to the growing discontent of labour; that is a factor no doubt, but a more obvious explanation is the amalgamation of local and sectional into national unions. The influence of unions in promoting the advance of wages is minimised by a comparison of wage-movements and trade union development in the nineteenth century. Such a comparison makes no allowance for the influence of union pressure upon the efficiency of industry, nor for any influence the unions may have had in preventing a less favourable distribution of the product of industry. It also ignores the influence of general changes on the level of prices, which explains both the check to the rise in real wages in the twenty years before the war and the increase in the amount of industrial unrest.

The main recommendations of the committee, however, are not invalidated by these criticisms. The extension of trade boards and of the conciliatory activity of the Ministry of Labour, the rejection of compulsory arbitration, special provisions for securing full consideration of all disputes in essential public services before a stoppage is permitted, an extension of profit-sharing (made possible by the differentiation of the class of joint stock companies to be subjected to special regulation by virtue of their quasi-public character), and the promotion of more effective machinery for negotiation in the individual firm, make a practical if not a revolutionary programme. The most interesting proposal falls under the last head, the proposal that there shall be statutory works councils in all establishments employing more than fifty employees; the detailed recommendations follow very much the lines of the German Works Councils Act, the substantial success of which is demonstrated in M. Guillebaud's recent book. It is a novel and a practical scheme for striking at the elements of irresponsible autocracy in industrial management, which survive all the Factory Acts, Minimum Wage laws and other general legislation. The committee rely also on the gradual

diffusion of ownership of capital to improve the status of the wage-earner and his relations with the employer. "We stand, not for public ownership, but for popular ownership." Again, they have no sweeping or spectacular proposal to make, but a series of small reforms, based on an unbiassed survey of existing arrangements, the cumulative effect of which would be considerable. This discussion, however, rather suffers from being separated from the discussion of joint stock company reform in Book II; the diffusion of industrial investments and the possibility of giving to wage-earners some share in accumulated reserves depend on changes in joint stock enterprise that have still to be made. I should like to express my doubts that there has been a "steady movement of opinion towards the view that the voluntary organisation of industries for self-regulation offers the true line of advance," and that the failures of Joint Industrial Councils have been due to their lack of compulsory powers. The failure seems to me to have been due to reliance for executive assistance on overworked trade union and employers' association officials, instead of employing an adequate independent staff, and I cannot think that Parliament will delegate legislative powers on bodies in the composition of which and the scope of which it has no say.

The fourth book, A Programme of National Development, has less interest than the others for economists, though more perhaps for politicians; a brief reference will therefore suffice. The main theme is that a period of trade depression provides an opportunity for using the labour released from private industry for capital development by public authorities, and that the special post-war unemployment calls for such a remedy. It is an old Socialist argument, the truth of which is hardly open to doubt, but the application of which in practice is extraordinarily difficult. In the present treatment, the first application is to agriculture. It is assumed, without being proved, that an increased financial return, an increased physical volume of output, higher wages and increased employment can all be secured. The ground for this assumption seems to be the familiar protectionist argument that we import agricultural products that we could raise at home; a table of such imports is given, and their exclusion, it is suggested, "would bring a sorely needed contribution to our balance of trade." Why we should not similarly object to the import of textiles and metal goods that we could produce at home, and what would happen to our export industries if we prevent other countries from buying them with their exports, is not discussed. Apart from agriculture, the chief objects proposed

for development are Housing, Electricity and Roads, which, it is suggested, have been "neglected." Housing is not capable of indefinite expansion, and the subsidies already given have drawn into Building so much labour that unemployment is now worse than in Engineering. Electricity is expanding rapidly without further Government assistance. The Committee's interest in Roads seems to be due to a fallacious comparison between motors in this century and railways in the last. The railways effected a revolution because they made possible a speed and volume of transport which were impossible before; the motor does nothing of the sort, all it does is slightly to increase the convenience of certain kinds of transport. A country does not grow rich by transferring its suburban population from perfectly adequate trains to omnibuses, or its parcels from railway vans to motor lorries. There probably are desirable and economical objects of expenditure for which the existing capital market makes no provision; but the Trade Facilities Act committee and the Unemployment Grants committee found it very difficult to find any. A programme of national development presupposes the continuous functioning of the economic general staff. One exception to this is, however, established in the chapter on The Rising Generation. It is a compact and constructive treatment of the educational and industrial needs of the adolescent, in the course of which some amazing figures of excessive hours of work are given.

The final Book deals with The National Finances, and cannot well be summarised in less space than it occupies in the report. Three salient features should be mentioned: an elucidation of the real nature of "economy"; an argument for the rationalisation of the public accounts with an indication of the form they should take; and a demonstration of the need for this reform by an examination of the "rigging"—the phrase is justified—of Budget results in recent years. Eighty-seven and a half millions were brought into account to balance the last two Budgets which did not belong in any way to revenue levied and accrued in those years; while the failure to attempt any distinction between Income and Capital accounts makes it doubtful whether any net reduction of debt, in spite of a large nominal Sinking Fund, was effected in those years at all. It is not unreasonable to attribute some of the innovations in the new Budget to the influence of this report, recent as its publication is.

The summary that has been given will suffice to show that the report is a document of first-rate importance to economists. It raises more questions than it answers, and its answers are not

final; but it contributes something to every question discussed, and succeeds in the object set before it, that of giving a complete and balanced survey of post-war industry in this country. One or two comments of a less specifically economic character suggest themselves. No distinctive social ideal informs and directs the report; it is conservative, not revolutionary, in the sense that all its proposals are elicited from the present order by criticism of that order in the light of its own principles. The aims of the report would probably be accepted by the other parties; the committee differ from them in a greater appreciation of the merits and possibilities of industry as at present organised than Labour, in a greater faith in the possibility of eliminating its defects and modifying it by Government action than Conservatives. A marked distrust of general principles is consistent with this attitude; the reference to the constitution of Public Concerns is characteristic—"The problem is a practical one, not an abstract one to be debated on high philosophical apriorities"; so is an incidental remark made in advocating profit-sharing—"This belief is not based upon any assertion of abstract right, which is always inconclusive." The committee's method is to work out reforms in the concrete, and leave it to the future historian of ideals to formulate the social ideal involved.

It is, however, interesting sometimes to look for general principles, and the welcome of the report by Socialists and Conservatives, who had not had time to do more than run over its proposals, is significant. It points to the break-away of Liberalism, not from *laissez-faire* in its popular sense, to which it never adhered, but from the Whig tradition of distrusting any concentration of social authority. The proposals of the report, if adopted, in addition to creating a number of official positions of an importance comparable with that of the Governor of the Bank of England, would enhance very greatly the powers of the Cabinet. They therefore raise the question of the political machinery needed to ensure the responsibility of members of the Cabinet and to enable them to discharge their extended duties. It is noticeable that the influence of the vacillations of the 1918–22 Government in helping to produce the present depression in agriculture and in coal-mining is not referred to; and the failure of reconstruction after the war, after all allowances have been made, points to limits to the capacity of the present Governmental machine, and the present Governmental personnel, to put work through. A Liberal Political Inquiry would usefully supplement the present report. Such an inquiry is needed for another reason.

The report never faces the difficulty in adjusting the relations of State and industry that arises, because the political and economic communities have not identical frontiers. It refers indifferently to "the State," "the community" and "the whole Society" as if they were identical. In spite of the post-war reaction towards economic nationalism, they are not; the economic community is still potentially the world, while the political community is an accidental and arbitrarily defined portion of the world. The Liberals of the nineteenth century relied on international trade, freed from the fetters of Government direction, to knit together the different parts of the world, and so provide a safeguard against war. A policy of national development does not necessarily interfere with such a tendency; but everything that helps to identify and interlock national Governments with the industry carried on in their territory intensifies national feeling. Since Socialism and Protection are the democratic and aristocratic versions of economic nationalism, the nationalist standpoint implicit in the report may have been another reason for the welcome given it by Socialists and Conservatives.

University of Manchester. HENRY CLAY

TAXATION, RISK-TAKING AND THE PRICE LEVEL

MR. D. H. ROBERTSON has recently[1] examined "the validity of some of the arguments with which Sir Josiah Stamp and other members of the Colwyn Committee . . . belaboured, in the name of orthodox economic science, the unhappy business men who sought to prove before them that income tax 'enters into' the price of goods." So far from complaining, I welcome this examination, for which the study and this JOURNAL are a far better setting than the mixed rough-and-tumble of cross-examination in a committee-room. Mr. Robertson has the advantage of us in his analysis, inasmuch as the cross-fire of a business committee does not facilitate keeping a large economic context explicit, or in the foreground, even though that context hangs on the skirts of blunt questions put in hastily conceived terms. There are two points in Mr. Robertson's examination which are practically unexplored by orthodox economic science, but which are well worth further analysis. One is the effect of high income taxes on that part of the rate of interest which covers risk-taking, and the other is the influence of changes in income tax on the *gold* price level.

Mr. Robertson questions the doctrine enunciated by Mr. Layton and Professor Seligman, that "costs include no element of profit, so that profit appears as a surplus above price-determining costs, and is indistinguishable in this respect from economic rent." He sees "a certain looseness in Professor Seligman's conception both of what constitutes the 'costs' of the marginal producer and of the sense in which the profits of the intra-marginal producer constitute a 'producer's surplus.' The man at the margin who makes no profits, *or who makes only the minimum profits which correspond to wages of management or recompense for the risk*, pays no tax because he makes no profits or pays *only a negligible tax* upon these minimum profits" (A. 121). "It makes surely all the difference in the world whether we are or are not to reckon among the costs of the marginal producer, which *ex hypothesi* determine price, all such profits as may properly be regarded as wages of management or remuneration for risk, yet Professor Seligman leaves us uncertain. If we *are* to include them, it can surely

[1] ECONOMIC JOURNAL, December, 1927.

scarcely be argued that even in America the Golden, still less in highly-taxed Britain, the aggregate tax upon all such profits is 'negligible.'" He goes on to show that Professor Seligman himself allows for the effect of taking too high a percentage of the plums—"the individual may prefer not to subject himself to the risk and may decide to be content with a smaller, but a surer, return." At this stage Mr. Robertson abandons the issue, merely upon the point that such risk-taking is surely a cost and not generally in surplus, and so refrains from pursuing a fruitful line of inquiry, that was certainly present to my mind during the later sittings of the Committee, but which I there had no opportunity of following. How, in fact, is risk-taking paid for?

It is generally explained simply that to get capital for a risky enterprise, a rate of interest higher than the normal must be offered—the normal return is specially "loaded" with an addition which progresses with the degree of risk.

> *Mrs. Wootton*, Q. (6726 7): "Surely, if people have the choice between using capital in two different ways, either as they are at present or in a new enterprise, their decision in making that choice will be affected only by something which upsets the relative effect of the two uses. What I want to get at is whether you are putting to us that the relative attractiveness of the use of capital as it is being used now, and its use in a more speculative way, is affected by high taxation?"
>
> *Mr. R. McKenna* (Q.): "Yes, that is exactly what is affected—the relative attractiveness of the two uses, the one use by a safe investment and the other use by personal effort engaging in risk but with an expected high return. As between those two, high taxation will reduce the return on the new enterprise, and therefore will induce the owner to use his money in a less productive way."
>
> *Sir Josiah Stamp* (Q.): "Do you base that entirely on its psychological grounds. May I suggest to you that it is mainly actuarial? Take this point: Supposing that you can get 5 per cent. without much risk, and the incentive to put your money into a more speculative thing must be a return of 7 per cent. to attract your money. There is a margin of 2. That margin surely in the long run has to be large enough to provide a pool which would cover all the losses that arise, otherwise capital will not be attracted. You have a certain amount of money in the pool provided by the 2 per cent. Taxation applies, unfortunately, not to the 5 per cent. only, but to the whole 7 per cent.; it applies to money which is not income at all, but is a pool; it halves your insurance fund; therefore, capital in the long run cannot be attracted into that market unless the rate goes up 2 to provide the

pool; the rate must therefore go up 4 and the new rate must be 9 per cent.?"

A. "I agree entirely; that is the explanation of it."

Q. "Supposing the difference between the two in the first place was 5, made up of 4 which was actually required to cover losses and 1 for reward for entering that particular enterprise, now under the new arrangement you have only got $2\frac{1}{2}$, which is less than the actual insurance fund requires."

A. "Yes, and it is not worth it."

Now this "actuarial pool" supplied out of the return upon capital may be the way in which business risk is borne or it may not. If it is, the investor may be aware of the fact or he may not. If he is, then his saving motives may be affected, and the supply of capital may become smaller, and the demand price on the smaller supply rise to a point which restores the actuarial equilibrium of the pool. If this has actually happened we should expect to see a wider spread or dispersion of interest rates on different classes of risks than heretofore. The evidence of fact is rather against this wider spread. If the investor is not aware, if he is not actuarially class conscious, and the "right" member who is lo ing knows not what the "left" member is gaining, then any given section of investors may go on supplying capital at the old rates of return, with the old gross margin for risk, oblivious of the fact that the new *net* margin for risk, after taxation, is quite inadequate to meet the losses.

There is the alternative possibility that the supply of capital might be redistributed and that the old four-percenters, free from risk, are now so disgusted with a return of 5 per cent. gross, and $2\frac{1}{2}$ to 3 per cent. net, that they decide to become risk-takers, and the supply of capital to the first category of demand for capital is diminished by a transfer of supply to the second category. This would have the effect of raising the gilt-edge rate, reducing the risk addition, and closing up the "spread." Thus it might be that a normal spread for contrasted classes would be 4 to 7 per cent., first widened upon an actuarial basis (through taxation at 10*s*. in the £) to 4 to 10 per cent. and then reduced on a reaction of this kind, redistributing the supply of classes of capital, to 5 to 9 per cent. Has such a change in the proportions of supply actually taken place?

Mr. Layton was generally not disposed to put the cramping effect of heavy taxation upon risk-taking too high:

Mr. Lees Smith (Q.): "The argument previously put before us has turned not so much on the readiness to work so many

hours a day as on the readiness to take risks. It has been put to us that a business man says: 'Why should I take a risk? If I lose, I bear the whole brunt of it, and if I gain, the Government takes 10*s*. Under those circumstances I will not go into these very speculative enterprises.'"

A. "I think there is something in that. I think it may be true that taxation may affect the extent to which people will take big risks, because the net return as between a speculative enterprise and a non-speculative enterprise is not sufficiently different. I think that the person who takes a really big risk is looking to the number of years in which he wants his money back rather than looking at it as an investment. If a man is only going to get 7 per cent. for a comparatively risky enterprise, it may be looked at simply from another point of view. He has got to have his money locked up in that speculative enterprise for a much longer period, because after all the high rate of profit on speculative investments is, to a considerable extent, a premium for amortisation. It has a relation to the number of years in which you can get your money back, and I think it is quite possible that the premium is unduly reduced now, and that it has some effect in deterring people from taking big risks."

Mr. McKenna's answers are interesting:

Sir Josiah Stamp (Q.): "I understood you to say that in your view the high income tax reduces the net rate of interest on capital and induces the holder of investments to take greater risks, to look for something that will give him something like the old return, even if there is a chance of loss attaching to it. That would seem to indicate that a high rate of taxation enables the more risky businesses to be financed; money will flow towards them?"

A. "Yes, I think that is so."

Q. "Could you make that consistent with your answer to Question 5. You say: 'In the second place, high taxation reduces the incentive to risk capital in the extension of business or to undergo the labour and anxiety accompanying new enterprise.' The two things seem to be inconsistent. I want to know what is your reconciliation?"

A. "When a man is in a business bringing him in an income—I am not dealing now with the man who is trying to save money, but with a man in an established business and earning a fair profit—he gets the opportunity, we will say, to put further into the business £10,000. He says, 'Shall I put it in or not? If I put it in, I pay income tax and supertax on my return. I am going to make in the business perhaps 6 per cent. on my £10,000; that is £600 a year, and I shall have to pay 50 per cent. in taxes; it is going to bring me in a net £300 a year; I will not do it, I will keep my £10,000.' This is dealing with a man who has got an amount

of money. In the other case I was dealing with a man who has not got much money and who is going to save it. Now in order to save quickly I think he will take a risk, which is quite a different thing from the case of a man who has got his money in an established business. Is it not consistent?"

Q. "Yes, I think on the margin it is. I think you might carry the argument a little further. You would have to say he was not prepared to invest it in his own business, but he would look round for other people's risky investments and put it into theirs?"

A. "That is true. Paradoxical as it sounds, it happens. He will not take the trouble himself; it is not worth the trouble."

But of course the return for risk may not be actuarial at all, even in an ill-informed and disjointed way, but psychological as in a lottery, in which, if the relation between the amount of the prize and the aggregate subscription were mathematical, there would be no profit. It is well known that a few specially large prizes may disproportionately increase the price people will give for their tickets. I have referred to the incidence of taxation where such an element is involved in Increment Value Duties, in dealing with the problem whether a distant and future tax on all prizes must be immediately amortised in a depression of prices current at the imposition of the tax.[1]

Now risk-taking may be like an inverted lottery, the converse of such a case, where one is paid to take tickets for a minus prize or obligation. The higher tax does not make the risk more likely to mature or alter its size—perhaps the obligation of loss which will be accepted may not vary at all exactly with the reduction in the offer on the tickets. This would certainly qualify the actuarial result.

But a more important matter is the range of risk over which a *direct* reward for risk-taking operates. For if the premium to meet it is not provided in the personal dividend, but dealt with as an expense of the business, the impact of taxation is quite different, and any argument about the interference with the size of the pool no longer applies. If there were no shipping insurance, and every shareholder took the risk of loss, it would be directly reflected in the rate of interest on shipping business, and the taxation of the insurance element, *as though it were a clear profit*, would be a very serious thing. For suppose the shareholder himself before taxation received 7 per cent. and set aside out of it 2 per cent. as an insurance premium, leaving him with 5 per cent. as his net return. After taxation at 10*s*. in the £, he would get $3\frac{1}{2}$ per cent. net and still require to set aside 2 per cent., leaving $1\frac{1}{2}$ per cent.

[1] ECONOMIC JOURNAL, July, 1911.

instead of 5 per cent. for the net or pure interest return—a tax of 70 per cent. instead of 50 per cent. As a matter of fact, this class of risk-bearing is paid for by the business, and is a business expense or *cost*, before income taxation is reckoned, so that a high income tax does not affect the return on capital directly. Of course, in this case, the insurer—say a marine insurance company —has a normal return for business, and its premiums cover the share of the capital loss pool, plus the return to capital employed, but only the latter element, or profit, is taxed. If higher taxation reduces this return the company will either "do as much work" (*i.e.* put up as much capital at risk) for the less return, or else put up shipping costs at the margin and so introduce them into price. But insurers will vary, and some get only the bare economic reward and others an "economic return" or differential profit above this—it is part of the general case that the tax on the latter will not enter into price or premium, and we are left the question whether all insurers, including the marginal ones, will offer less "work" for the reduced reward, and this is only one case of the whole class of reduced offers or lessened suppliers for a reduced return in gold. Thus an important class of risk-taking is reduced, in its effect upon price, to the normal problem. Now if the risks which the shareholder bears *out* of his return are, in fact, so badly punished as to lead to economic reluctance, but the risks which are borne in arriving *at* his return are let off as business expenses, a tendency must be set up to shift risks from the former to the latter class, and to widen the field of industrial insurance. It will probably be agreed that this has to some extent happened. But there are two large and important classes of special interest return for risk where this does not and cannot apparently happen; first, *e.g.* the risk of failure in new ventures, invention and processes, and, second, the amortisation of the wasting asset, *e.g.* the gold mine. In the first it should be noted that wherever losses of capital, proceeding by the usual way of accumulating annual trading losses, are incurred by a large concern with numerous other activities, they are a set-off against profits before taxation. The return to the investor is reduced by taxation to a much *less* extent than if there were two businesses run by separate companies, and he had a dividend from a profitable business and "nil" from the unprofitable. This risk is thus borne partly out of high taxation, analogous to the expenses which were so lightly undertaken when the excess profits duty bore 80 per cent. of them.[1] Again, a trust company may touch

[1] Generally, for the extent to which "losses" come out of taxable profits, *vide* my *British Incomes and Property*, Chap. VI.

the personal psychological factor, for although the trust company does not succeed in getting unprofitable returns set off for taxation against profitable ones (or "minus" dividends deducted from "plus" ones), it does at any rate lift a burden of individual risk-taking from a person's *feelings* and average it for him, so that he may be taking the old risks with smaller returns without realising it.

We are thus now left with (*a*) the uninsurable risk of the new enterprise failing to make good in an entity *specially* charged with it, and (*b*) the wasting asset.

The incidence of taxation on physically wasting assets, such as mines, is popularly supposed to be most unfair, inasmuch as the working out of the *corpus* is treated as taxable profit. When the mine is exhausted all the original capital is gone, but in its gradual return it has been taxed as income. It makes no difference in this case whether the concern provides its own amortisation fund and only pays net dividends, with a return of capital at the end, or whether it follows the usual course of paying the gross dividend and leaving the recipient to provide his own amortisation. In neither case is the amortisation charge allowable as an expense. That this common view of incidence is untenable I showed in this JOURNAL some years ago,[1] and again before the Royal Commission on Income Tax, 1920. The proof rests upon two main points, viz. amortisation of a differential burden at the time of the original investment and the availability of an alternative method of payment, in royalties subject to gradual or annual tax. But this proof takes into consideration only a "foreseeable" and stable level of taxation. A sudden and unexpected increase, such as was due to the war, is not contemplated, and the incidence of this is mainly upon the mining owner at the time of the change. A heavier income tax definitely cuts into the amortisation fund, and really (for the excessive rate of tax) takes capital as income, and every fresh investment of capital in sinking, shaft-making and other exhaustible assets required in extending properties already purchased is punished and discouraged thereby. This element of income tax then artificially raises the price of capital for mining at the margin.

From this discussion I wish to save for later use two probabilities or conclusions :

> A. That a moderate residuum of the whole class of the service of risk-taking is discouraged by high taxation, perhaps to a greater extent than any common discouragement that

[1] ECONOMIC JOURNAL, March, 1910.

may be postulated of energy and production in general, and that it is probably this risk element in production which would be responsible for any reduced production that occurs, and—

B. Wasting assets, such as mines, tend to suffer specially any such discouragement.

Both of these conclusions are due to the fact that some tangible disability, other than psychological factors, is present.

Professor Pigou dealt specifically with income tax as a check to work and saving, and then to production, and to the "double taxation" of income saved.

Sir Arthur Balfour (Q.): "Would you say that income tax does not induce a higher selling price?"

A. "Not directly."

Q. "But indirectly?"

A. "I think it may indirectly, as I go on to suggest, in so far as it restricts savings and work."

Mr. J. H. Hobson dealt specifically with a rain of questions (1601–65) on the way in which income taxation reaches his economic "surplus" in all the rewards of economic factors, and also with the question of the equivalence of the quantity of commodities, and an equivalence of total purchasing power in the hands of the Government and the taxpayer.

Sir Josiah Stamp (Q.): "May I put another difficulty which I always feel in following your exposition of this. You speak of rising prices. I take it you mean prices not in other commodities but in gold?"

A. "Yes."

Q. "I suppose you accept the quantity theory as expounded to-day, within limits?"

A. "Yes."

Q. "Supposing that under existing circumstances the total amount produced and purchased is a certain sterling figure, then the Government imposes a tax of 25 per cent. on everybody's income, they take away from the spender 25 per cent. of his purchasing power, and then they expend that themselves. Is that right?"

A. "Yes."

Q. "What puzzles me is, where is the room for the increased price? You get the same quantity, the same purchasing power, and the same quantity of gold? But there is no less purchasing. The State purchases instead of the individual. On the assumption that the purchasing power

remained the same, you have the same quantity of commodities as measured against the same quantity of gold?"

A. "Yes."

Q. "How do you get an increased price without increasing your currency?"

A. "That is bringing me on to the relation of currency to credit. I am afraid I do not say that it is not a perfectly legitimate line."

[Then follows a passage, irrelevant here, on the change in velocity of circulation.]

Q. "I cannot see how prices could be raised."

A. "There is no raising of prices."

Q. "General raising."

A. "If that be so, then of course the attempt to do so is spoiled, as it were, and it is sent back until, according to my view, it finds, if it can find, some surplus upon which it will lie, such as rent of land or some superior earning power."

Q. "It seems to me that there must be unequal vulnerability of prices if your theory is true. Some prices must go up and some prices must go down, but the general index-number would not be affected."

A. "It seems so."

Q. "I know it is a very difficult and rather abstruse economic consideration. I do not want to face you with it now, but if on reflection you see any answer to my difficulty, I would be very glad if you would send it on."

A. "It is a new point in the form you put it, but I should be glad to consider it."

He afterwards submitted a written reply:

"The case put was that, since the State might spend the money taken in taxation as quickly as it would have been spent if left in the hands of those who paid the taxes, there might be the same amount of purchasing power set to buy the same quantity of goods. In that case no rise of price, and therefore no passing of the tax, was possible. My answer is that the rise of prices would occur through a shrinkage of supply of goods. For, *ex hypothesi*, the competitive price that prevailed was such as enabled only a minimum rate of profit and of interest to be earned. The tax imposed on such increases would not only check the flow of any fresh capital, by reducing the rate of saving and investment, but, if persisted in, would cause a letting down of productive plant. In either event there would be reduced rate of production, as compared with what would have taken place had no tax been imposed. *This reduced supply with no reduction in the quantity of purchasing power signifies a higher price level.*" (Italics mine.)

Mr. Robertson's comment in his article is: "Mr. Hobson allowed himself to be temporarily blinded with this argument by Sir Josiah Stamp, but after reflection gave correctly the obvious answer, that 'the rise of price would occur through a shrinkage of supply of goods.'" But Mr. Robertson did not mention that the answer was given in writing and there was no opportunity for cross-examination upon it. I had approached the "gold question" from several angles: (*a*) the quantity equation and the difficulty of getting the equation satisfied if the quantities remained the same at a higher price level without any increase in currency (Q. 9046, etc.); (*b*) the balance of trade equation and the effect of a higher domestic price level upon increasing imports, diminishing exports, promoting an outflow of gold and again reducing prices (Q. 9034, etc.); and (*c*) the elasticity of demand difficulty, if the same quantity of goods are to be taken off at a general level of higher prices.

It was hardly feasible to chase economic dilemmas any further without being put out of the committee-room by my less fastidious colleagues. The point that has not been faced by those who, in talking of the undoubted "dampening" of production and risk-taking, jump to the conclusion that this scarcity or lessening of supply must mean a higher price, is that one commodity or service is "priced" in another commodity, and that price is a mere equation between the economic efforts of production in one article against the economic costs of producing another. Thus, if the price of a lb. of tea in sugar is 5 lbs., and for some special reason the difficulties or costs of producing both are doubled, or the crops are halved for the same effort, then—assuming no difference in the relative elasticities of demand—the price of tea in sugar will still be 5. We all recognise that if gold becomes "easier" to produce, relatively to all other things (by new discovery or process), the gold price level will rise, and vice versa. But if a common cause makes gold and other things and services *equally* easier or more difficult to come by, then, *ex hypothesi*, the price level does not alter. Now gold production is an economic business like any other—it requires capital, risk-taking, management and labour. The profits and interest are equally the subject of taxation with all other profits and interest. If high taxation dampens enterprise in copper-mining, meat-raising and boot-making, because it lessens the reward for enterprise and risk, then equally it dampens the enterprise in gold-mining, which cannot be artificially distinguished. Instead, therefore, of lessening the commodity side of the quantity equation and leaving the gold

side alone, so that a higher price level results, the gold side has to be lessened too, and if it cannot be shown to be lessened to a different extent it can hardly be argued that the price level is affected.

Let us look at several possible qualifications of this crude general statement. First, it can be said that price is the result of comparing the volume of a *flow* of consumable commodities with the volume of an indestructible *stock* of gold with annual additions, and that a 20 per cent. reduction in the flow of one and in the addition to the other are very different things. For if the annual monetary addition is only 5 per cent. of the stock, then commodities would fall by 20 per cent., while the total money would be only 1 per cent. less than it would otherwise have been. On this footing, while both sides of the quantity equation are affected, there is still room for prices to rise, though not to the full extent originally assumed. The position is still, however, too simple for the real world.

(*a*) If we assume that there is, before the modifying influence, a certain commodity production and a certain gold addition such that a certain stable price level (or definite trend of change) ensues, and that after the modifying influence operates, this level (or trend) is altered so that commodity prices rise, then more gold has to be given for a particular quantity of goods, and it becomes definitely less advantageous than it was, at the margin, to produce gold than goods, and the application of new capital and labour to gold becomes less favourable, setting up a relative diminution in the supply or production of gold, to the point that its value rises again to meet its true comparative costs, and gold prices fall.

(*b*) Gold is only the first basis of prices, and the much greater credit structure superimposed upon it is the closer determinant. The size of the structure relative to gold, if constant, would mean that the 20 per cent. reduction in the gold addition or 1 per cent. in normal total stock, referred to above, must also become a 1 per cent. reduction in the whole gold, plus credit, structure. But the relation is not constant, and the greater the " risk " we are prepared to take the greater the superimposed credit can be. But credit-giving is, over a large part of its field, a profit-making and risk-taking business, the results of which, by hypothesis, are subject to heavy taxation, and there seems no good reason for alleging that the cramping and dampening effect of high taxation should not apply to this particular business too. Moreover, credit is not a permanent stock like gold; it is remade continually, it is a flow,

and, as such, the effects apply to the whole body of it and not merely to an increment in it. From conclusion A, which I left in abeyance, it seemed probable that in high taxation there was some residuum of actuarial as well as psychological interference with the service of risk-taking as against only the psychological element in rendering other services. If this is so, the disability may well be operative in risk-taking of this order in credit-making, and serve to emphasise the reduction of this side of the equation. There is thus no reason to suppose that the monetary side of the price-level equation is not disturbed by high taxation to an extent which, while not identical, is of the same *order* of magnitude as the effect upon the commodity side. Any differences due to changes in the elasticity of demand for the products of different businesses now in smaller supply must tend to counterbalance, and in the aggregate be very small.

But I should now like to rejoin conclusion B, reached a few paragraphs back. High taxation, which in ordinary cases is said to introduce a psychological inducement to smaller production, in the case of mining introduces an actual new financial element of cost. A given additional unit of 10 per cent. of new taxation on ordinary net profits represents much *more* than 10 per cent. on the true *net* profits of gold-mining. This tends to be a real addition to cost at the margin, and to lessen the relative ease, or attainments, of gold-mining in such wise that the supply of gold is relatively more reduced, and its commodity value rises, *i.e.* the price level falls.

On all counts then it appears to me the Hobsonian thesis, as endorsed by Mr. Robertson, fails to meet the test of facts and analysis, and that the main economic position that the price level is practically unaffected by high income taxation remains intact. (I do not wish to prove too much, and I hesitate, therefore, to accept the logic of my own argument, and aver that high income tax probably lowers the price level!)

Mr. Robertson's proddings give so much pleasure and stimulation that I will not touch the rest of his article or deprive Mr. Coates of the satisfaction of proving that he is a good Marshallian after all.

J. C. STAMP

NOTES ON INDEX NUMBERS[1]

A SERIES of index-numbers is a series of indicators of the movement of a phenomenon variable in time, whether the phenomenon can be completely or directly measured or not. Where there can be complete or direct measurement, the method of index-numbers is only a particular way of setting out certain arithmetical processes; where not, there arises the need of the application of certain hypotheses and the development of an appropriate theory. An indicator must satisfy the conditions that the times of its maximal and minimal readings synchronise (or definitely precede or follow) the maxima and minima of the phenomenon, and that the amplitudes of its fluctuations are greater or less in sympathy with those of the phenomenon. The indicator becomes more exact when its movements, or the amplitudes of its fluctuations, are directly proportional to those of the phenomenon, and to obtain such a direct relation is the objective of most index-numbers. The words indicator and index-number may be conveniently used respectively for the cases where the movements are only sympathetic and where the relations are direct and measurable.

We may proceed at once to the case where a series of index-numbers is obtained by combining a number of series of observations, ignoring such a case as the measurement of the output of the cotton industry by the consumption of raw cotton, where only one series is considered. In other words, we at once relate index-numbers to averages. The general assumption in one group of problems is that we have series of measurements of a number of quantities, such as the prices year by year of a defined commodity, which are known to depend on general causes which influence them all in the same direction, such as an effective addition to the supply of currency, and on causes special to the particular series, such as changes in the supply of or the demand for copper. The problem then is to eliminate the effects of the special causes so as to be left with a measurement of those of the general causes.

[1] These notes reproduce the gist of the Newmarch Lectures at University College, 1928. A good deal of matter that is familiar to students of the subject is omitted, while new statistics are retained and analysis that was unsuitable for oral lectures is developed. The notes relate to special problems and are not intended to afford anything approaching to a complete study of the subject.

1. Unweighted Means

First let us assume that each series of observations is *a priori* of the same valency in relation to the objective, without attempting to determine the vexed question whether this assumption is justified in any particular case. We have then to decide what kind of average is appropriate for the elimination of variations, that is, in practice to choose between the unweighted arithmetic, harmonic and geometric means, the unweighted median and the mode.

The unweighted arithmetic mean.—Let $y_1, \ldots y_s \ldots y_n$ be n observations at one date in each of n series, and let I be the objective (the index-number at that date). Write any observation in the form $y_s = \mathrm{I} + e_s$, where e_s is the error or residual. Then if $e_1 \ldots e_s \ldots e_n$ are distributed in accordance with the normal law of error, it is known that the value of I from which these errors would arise with least improbability is the arithmetic mean of the observed y's. The validity of this mean is then established, if it can be shown that the e's, which may be written $y_1 - \mathrm{A}, \ldots y_s - \mathrm{A} \ldots y_n - \mathrm{A}$, are normally distributed, where $n\mathrm{A} = y_1 + \ldots y_s \ldots + y_n$.

The unweighted geometric mean.—An alternative relation is $y_s = \mathrm{I} \times \eta_s$, or $\log y_s = \log \mathrm{I} + \log \eta_s$, where $\eta_1 \ldots \eta_s \ldots \eta_n$ express the varying proportions of the observations to the objectives: Write G for the geometric mean of the y's. Then $n \log \mathrm{G} = \Sigma \log y_s = n \log \mathrm{I} + \Sigma \log \eta_s$.

If now the quantities $\log \eta_1 \ldots \log \eta_s \ldots \log \eta_n$ are normally distributed, it is known (by the same analysis as that on which the previous paragraph depends) that G is the value from which the observed variations would arise with least improbability.

A reasonable method of deciding whether the arithmetic mean or the geometric is the better is to ascertain whether, in fact, the variation of the quantities or the variation of their logarithms is the nearer to that given by normal distribution. For this purpose the price-movements used to form the *Statist* Index-number have been tested in various ways.

Write $\mathrm{D}_1, \mathrm{D}_2 \ldots \mathrm{D}_9$ for the deciles [1] of the 45 price-relatives and in any year in the *Statist* number, and $\mathrm{M} = \mathrm{D}_5$ for their median.

Test of Symmetry.—If the distribution about the arithmetic mean is normal, then M is the average of D_1 and D_9, or D_2 and

[1] The median divides an ordered list of numbers, so that there are as many entries above as below it. The deciles divide it similarly into ten divisions each containing an equal number of entries.

D_8, etc. A coefficient of asymmetry can be formed from pairs of deciles thus: $v_1 = \dfrac{MD_6 - D_4M}{MD_6 + D_4M}$; v_1 is zero in case of symmetry, and may be anywhere from $+1$ to -1 for asymmetry. v_2, v_3, v_4 are similarly written from the pairs D_7, D_3; D_8, D_2; and D_9, D_1.

Statist Index

	Year 1913. Base 1867–77. Nat.	Log.	Year 1926. Base 1867–77. Nat.	Log.	Year 1920. Base 1913. Nat.	Log.	Year 1925. Base 1913. Nat.	Log.
v_4 .	$-\cdot25$	$-\cdot50$	$\cdot054$	$-\cdot15$	$\cdot23$	$\cdot04$	$-\cdot15$	$\cdot27$
v_3 .	$-\cdot33$	$-\cdot42$	$\cdot15$	$-\cdot01$	$-\cdot10$	$-\cdot24$	$+\cdot05$	$-\cdot03$
v_2 .	$-\cdot36$	$-\cdot40$	$\cdot04$	$-\cdot06$	$-\cdot3$	$-\cdot38$	$-\cdot07$	$-\cdot2$
v_1 .	$\cdot60$	$-\cdot55$	$\cdot07$	$-\cdot01$	$-\cdot6$	$-\cdot6$	$-\cdot2$	$-\cdot2$

In this table the numbers under "Nat." are the coefficients applied to the price-relatives (*i.e.* the prices expressed as percentages of their levels at the base period), those under "Log." are the coefficients applied to the logarithms. If the natural numbers were normally distributed, each entry in the first of the pairs of columns would be zero; if the logarithms, then the entries of the second of the pairs. It is evident that there is considerable want of symmetry in both methods, and that there is little to choose between them.

This method, which is a development of rough tests formerly used, is not at all a complete test, and is uncertain when applied to so few entries as 45.

Test by distribution.—A more satisfactory method is to select two points in the distribution and consider how the spacing of the observations between those points corresponds with that in the normal curve. In the following table the observed D_1 and D_9 are taken as the fixed positions, and the expected and actual positions of the intermediate deciles are compared.

	Year 1926. Base 1867–77. Expected.	Actual. Nat.	Log.	Year 1920. Base 1913. Expected.	Actual. Nat.	Log.	Year 1925. Base 1913. Expected.	Actual. Nat.	Log.
D_1 . .	77	77	77	176	176	176	117	117	117
D_2 . .	93½	93½	88	236	204½	213	132	138	128
D_3 . .	104½	98	97	281	220	244	139	128	137
D_4 . .	114	106½	106	316	254½	273	149	153½	144
D_5 . .	123½	121	114	351	299	304	157	163	152
D_6 . .	133	137½	124	386	310½	340	165	169	160
D_7 . .	142½	146	134	421	343	381	173	176	169
D_8 . .	153½	158	148	466	377	426	182	190½	180
D_9 . .	170	170	170	526	526	526	197	197	197

In the first and third panels the natural price-relatives satisfy the test better than the logarithms, though there is not very much to choose; in the central panel the logarithms are definitely nearer to the theoretical distribution than are the natural numbers. Now the whole movement from 1913 to 1920 (the period of the central panel) and the dispersion of the prices are much greater than in either of the other periods. It is also in this period that in the former test of symmetry the logarithms made the better showing. The indications are that in times of rapid movement of prices the geometric mean is the safer. But when the quantities averaged are little dispersed the geometric mean is close to the arithmetic mean, and where the dispersion is considerable, so is the difference between the means.[1] We may therefore expect to be safer with the geometric mean in the latter case and very nearly as safe in the former case, and for this reason the geometric mean is to be preferred.

The harmonic mean may be regarded for the present purpose as a variant of the arithmetic mean, obtained when the prices are equated to 100 at the end instead of at the beginning of the period, a case which may be merged in the discussion of weighted means.

The unweighted *median* was advocated by Edgeworth on the grounds that it was not affected by irregularities at the extremes, as are the arithmetic and geometric means, an important consideration when the observations are regarded as fortuitous samples; and that when it differed from the arithmetic mean it commonly is less than it and so approximated to the geometric mean, and tended to correct the asymmetry of the observations, which he found in the cases he examined.

The arguments urged in favour of the geometric are as follows :—

(1) If two estimates are made of the same quantity which in fact is 100, then they are equally in error if, as, for example, 80 and 125, the lower is the same ratio to the true quantity as that is to the higher, and not equally in error if, as 80 and 120, the absolute errors are equal and opposite; for if the latter were the case, 0 and 200 would be equally erroneous estimates, which is absurd. This argument only applies if there is a natural zero to the scale and is not at all convincing. Nor is the relevance to the

[1] In the notation already used, write $y_s = A(1 + d_s)$, so that $\Sigma d_s = 0$.

Then $n \log G = n \log A + \Sigma \log (1 + d_s) = n \log A - \frac{1}{2}\Sigma d_s^2 + \frac{1}{3}\Sigma d_s^3 - \dots$

$\therefore G = A \cdot e^{-\frac{1}{2}\mu_2 + \frac{1}{3}\mu_3 \dots} = A(1 - \frac{1}{2}\mu_2)$, approx., where $\mu_2, \mu_3 \dots$ are the mean square and mean cube of the d's. μ_2 measures the dispersion.

If H is the harmonic mean of the y's, then $H = G(1 + \frac{1}{2}\mu_2)$ approximately.

problem before us obvious. The problem being one of elimination, the actual distribution of the errors, as discussed above, affords a sound test of appropriateness.

(2) Jevons appears to have argued that changes in the amount of currency tended to result in equal ratio changes in prices, and that therefore the chance variations in particular prices were to be regarded as ratio changes.[1] The test is again the actual distribution, which should be positively asymmetrical if the natural price-relatives were taken, but symmetrical in their logarithms. The tests above give little support in general to this.

(3) The geometric mean satisfies the "transitive" condition; that is, if an index I(AB) is computed by it, as measuring the change from a basic time or place, A, to another, B, and then starting afresh I (BC) is computed to another time or place, C, with B as base, then I (AB) $\times$ I (BC) = I (AC), the change computed directly from A to C by the same method, with A as base. The computation thus becomes independent of the choice of the base year, which is a great practical convenience.

(4) It equally satisfies the reversal test, which is that I(AB) $\times$ I(BA) = 1.

Neither of these tests are satisfied by the arithmetic or the harmonic means, nor except by accident by the median. But it is not in the least evident that either of these tests need be satisfied when the problem is simply the change of prices from A to B.

In fact it appears that none of the four arguments adduced is soundly based on relevant *a priori* premisses, and the use of the geometric mean may be best supported on the grounds that it appears to be safer when price-changes are much dispersed, that in other cases it is very near the arithmetic mean, and that in practice it has the convenience of being independent of any arbitrariness in the choice of the base year. It is also, in fact, easier to compute when, as is usual, the computation is repeated on similar material year after year, for the general reasons that lead computers to prefer logarithms to processes of multiplication and division.

2. Index-numbers and Sampling

In discussions on the theory of index-numbers it is often implicitly assumed that the data are complete and accurate, while in practice the main difficulties in measuring general price-changes are connected with the sparseness and roughness of the data.

[1] See Economic Journal, 1921, p. 202, for the mathematical expression of this.

The simplest method of approach is to suppose that, in the above notation, $y_1 \ldots y_s \ldots y_n$, are of the nature of n independent measurements of an objective, and that we are in the position where A, the arithmetic mean, is the best value we can choose for its measurement. The error of sampling to which A is liable then increases with σ, the "standard deviation," where $n\sigma^2 = \Sigma(y_s - A)^2$, and diminishes with the square root of n. That is, the standard error of A is $\frac{\sigma}{\sqrt{n}}$. σ is readily computed from the observations. For example, if we take the 45 price-relatives used in the *Statist* Index for 1926 (base 1867–77), A = 126, σ = 44, and $\frac{\sigma}{\sqrt{n}} = 44 \div \sqrt{45} = 7$ approx., and the index-number may then be written 126 ± 7; meaning that it is liable to an error whose standard is 7; but it is better perhaps to express it in terms of its probable error and to say that (on the hypotheses implied) it as likely as not to be $4\frac{1}{2}$ points wrong ($126 \pm \frac{2}{3}$ of 7).

But this simplest method is not really applicable, for the nature of the observations is more complicated and it cannot be assumed that the price movements are independent.

Write ${}_ty_s$ for the price-relative of the s^{th} commodity t years after the basic year, and write P_t for the index-number in that year, computed on whichever method is deemed to be best. Regard P_t as measuring the true general movement of prices, so that the fraction ${}_ty_s \div P_t$ expresses the price of the s^{th} commodity in terms of the price of "things in general." Then observation of the yearly index-numbers of the commodities shows that this ratio has often a tendency to move away from its starting-point, unity, in the course of time; thus in the period before the war the price of sugar thus expressed tended downwards and that of meat upwards. Besides this general trend there is a residual, sporadically positive or negative.

We may thus write $\frac{{}_ty_s}{P_t} = a_s + b_st + c_st^2 + \ldots + v_s$, where t is the number of years, $a_s, b_s \ldots$ are constants to be determined from the observations (by least squares or otherwise), and v_s is the residual.[1]

Now the price-relatives all show a correlation with the general movement of prices, with which we are not concerned and which is eliminated by taking the ratio of y to P as our starting-point. Further, many of them show a dispersion which increases with time, measured by the coefficient b_s in the above equation for the

[1] See *Journal of the Royal Statistical Society*, 1926, pp. 300 seq.

s^{th} commodity, and we are not concerned with the correlations necessarily arising from these trends. Finally, there may be correlations in the residuals, as, for example, the price of flour moves positively from its trend when the price of wheat does so.

All these coefficients and such correlations as are significant have been computed for the 45 *Statist* numbers over the 47 years 1867 to 1913, t being measured from 1867. It is found that the standard deviation of the resulting index-number expressed as a percentage of that number (the "coefficient of variation") is $\sqrt{\{\cdot 0068t^2 + 3\cdot 8\}}$, if no correlation between the residuals is allowed for, and is increased to $\sqrt{\{\cdot 0068t^2 + 6\cdot 4\}}$ if the significant correlations are brought into account.

Some of the values of this expression are—

t.	Allowing for correlation.	Not allowing for correlation.
0	2·5	1·8
10	2·7	2·1
20	3·0	2·5
30	3·5	3·1
40	4·2	3·8
47	4·6	3·9

As time flows on this tends to $\cdot 082t$.

The *Statist* index-number for 1913 was 85 (1867–77 base). It may now be written $85\left(1 \pm \frac{4\cdot 6}{100}\right) = 85 \pm 3\cdot 9$, or in terms of the probable error $85 \pm 2\cdot 6$.

If correlation was ignored the last expression would have been $85 \pm 2\cdot 2$. Owing to correlation the 45 entries are equivalent to only $39\frac{1}{2}$ independent entries.

On the basis of this method and results we may write the *Statist* index-number for 1925 (1913 as base) in the form $162\frac{1}{2} \pm 3\cdot 6$; it is as likely as not that from the accident of sampling the index is 3·6 points (or 2·2 per cent.) in error, and this result is typical for index-numbers when the dispersion of price relations is not very great nor the base year very remote.

Experience and theory combine to show that when the index-numbers are unweighted and the prices are properly regarded as samples, there is a want of precision which increases as the base year recedes, and is specially great in times of rapid movement and marked variation of separate price-changes. This error is present also in weighted averages, but may conceivably be damped down when the weights are chosen so as to bring

deliberately the sample near to the objective, as in the next sections.

3. Cost-of-living Index-numbers

From the general and rather vaguely defined problem of measuring the changes of prices in general we now pass to the specific question, what change in expenditure is necessary after a change of prices to obtain the same satisfaction as before?

For this measurement it is necessary, theoretically at least, to have records of expenditure at both dates. Suppose that we ascertain, by a collection of budgets or otherwise, that at one date, say 1914, there were n commodities purchased, of the first Q_1 units at the price P_1 per unit, of the second Q_2 at price P_2, etc.; and that at the second date when the prices are p_1, p_2, etc., the quantities q_1, q_2 . . . are purchased.

The ordinary method, used by the Ministry of Labour, is to compare the cost of obtaining the same quantities Q_1, Q_2 . . . at the two dates. Suppressing the usual factor 100, we may write the result in the form $I_1 = \frac{\Sigma Qp}{\Sigma QP}$, where ΣQP is written for $Q_1P_1 + Q_2P_2 + \ldots + Q_nP_n$, and similarly for the numerator.

An alternative method, used by a committee of Labour associations in 1920,[1] is to take q_1, q_2 . . . as the quantities at both dates, and to use the form $I_2 = \frac{\Sigma qp}{\Sigma qP}$. I_1 and I_2 seem to have equal claims as measurements of the change, and it has been suggested that an average of them would give a better approximation than either separately. The forms proposed are $\frac{1}{2}(I_1 + I_2)$, $\sqrt{(I_1 \times I_2)}$ and $\frac{\Sigma(Q + q)p}{\Sigma(Q + q)P}$. The second is Professor Irving Fisher's "ideal index-number," but the analysis that follows supports the last as giving the true measurement.

In the paragraph above the word satisfaction was used without definition. Assume that our records represent the expenditure of an average man, and that the satisfaction he derives from his purchases is a function of the quantities bought only, say $U(x_1, x_2 \ldots)$, where x_1, x_2 . . . x_n are the numbers of units bought of the n commodities. Further, suppose that the form and constants of this function are unchanged over the period considered. The last condition limits the measurement to an interval of time in which customs and desires have not changed and to a not very wide range of real income. The analysis and

[1] See Economic Journal, 1921, pp. 406 seq.

conclusions do not apply to comparisons between citizens of two countries, nor over, say, 60 years in one country. The relevance can be tested by general statistics of consumption, which show for England that the changes in habit were slight between 1904 and 1927.

Using the hypotheses customary in mathematical economics, we suppose that a given total expenditure E is distributed among the commodities so as to maximise U. At the first date, then, $x_1 = Q_1$, $x_2 = Q_2$ . . . give the maximum of $U(x_1, x_2 \ldots)$, subject to the condition $x_1P_1 + x_2P_2 + \ldots = E$, constant.

The solution is given by the equations

$$\frac{\partial U}{\partial x_1} = MP_1, \quad \frac{\partial U}{\partial x_2} = MP_2, \ldots,$$

that is

$$M = \frac{1}{P_1} \cdot \frac{\partial U}{\delta x_1} = \frac{1}{P_2} \cdot \frac{\partial U}{\partial x_2} = \ldots = \frac{1}{P_n} \cdot \frac{\partial U}{\partial x_n},$$

when we put $x_1 = Q_1$, $x_2 = Q_2$ . . .

Here M is a constant, identifiable with the marginal utility of money for the " average " man, with prices and total expenditure known. In the function it is not assumed that the values of $x_1\ x_2$ . . . are independent of each other, and $\frac{\partial U}{\partial x_1}$ may involve Q_2, Q_3 . . . as well as Q_1.

Similarly, at the latter date, if m is the marginal utility of money under the same circumstances, we have

$$m = \frac{1}{p_1} \cdot \frac{\partial U}{\partial x_1} = \frac{1}{p_2} \cdot \frac{\partial U}{\partial x_2} =, \text{ when we put } x_1 = q_1, x_2 = q_2 \ldots$$

Write $\mu = \frac{M}{m}$, the ratios of the marginal utilities, and write $\delta Q_1 = q_1 - Q_1$, $\delta Q_2 = q_2 - Q_2$ . . . , the increments in expenditure. Write $U(Q)$, $U(q)$ for $U(Q_1, Q_2 \ldots)$ and $U(q_1, q_2 \ldots)$.

Then, expanding by Taylor's theorem, we have

$$U(q) - U(Q) = \Sigma\delta Q_1 \cdot \frac{\partial U}{\partial x_1} + \frac{1}{2}\left(\delta Q_1^2 \cdot \frac{\partial^2 U}{\partial x_1^2} + 2\delta Q_1 \delta Q_2 \frac{\partial^2 U}{\partial x_1 \partial x_2} + \right),$$

when Q_1, Q_2 . . . are written for x_1, x_2 . . . after differentiation. In this we have neglected smaller terms, such as $\delta Q_1^3 \cdot \frac{\partial^3 U}{\partial x_1^3}$, which involve the curvature of the demand curves for individual commodities, multiplied by the cube of a quantity which may be considered small.

For the first term on the right hand we can write at once

$$\Sigma\delta Q_1 \frac{\partial U}{\partial x_1} = \Sigma MP\delta Q = MP_1\delta Q_1 + MP_2\delta Q_2 + \ldots$$

To reduce the second term, write

$$\frac{\partial U}{\partial x_1} = f_1(x_1, x_2 \ldots),$$

$$\frac{\partial U}{\partial x_2} = f_2(x_1, x_2 \ldots), \text{ etc.}$$

Then

$$f_1(q_1, q_2 \ldots) - f_1(Q_1, Q_2 \ldots) = \delta Q_1 \cdot \frac{\partial f_1}{\partial x_1} + \delta Q_2 \cdot \frac{\partial f_1}{\partial x_2} + .$$

$$= \delta Q_1 \cdot \frac{\partial^2 U_1}{\partial x_1^2} + \delta Q_2 \cdot \frac{\partial^2 U}{\partial x_1 \cdot \partial x_2} +,$$

$$f_2(q_1, q_2 \ldots) - f_2(Q_1, Q_2 \ldots) = \delta Q_1 \frac{\partial^2 U}{\partial x_1 \partial x_2} + \delta Q_2 \cdot \frac{\partial^2 U}{\partial x_2^2} +, \text{ etc.}$$

where Q_1, Q_2 . . . are written for x_1, x_2 . . . after differentiation.

But $f_1(Q_1 . Q_2 \ldots) = MP_1$, and $f_1(q_1, q_2 \ldots) = mp_1$ etc.

Now the expression

$$\delta Q_1^2 \cdot \frac{\partial^2 U}{\partial x_1^2} + \ldots + 2\delta Q_1 \cdot \delta Q_2 \frac{\partial^2 U}{\partial x_1 \cdot \partial x_2} + \ldots$$

$$= \delta Q_1\left(\delta Q_1 \frac{\partial^2 U}{\partial x_1^2} + \delta Q_2 \cdot \frac{\partial^2 U}{\partial x_1 \partial x_2} + \delta Q_3 \cdot \frac{\partial^2 U}{\partial x_1 \partial x_3} + \ldots\right)$$

$$+ \delta Q_2\left(\delta Q_1 \frac{\partial^2 U}{\partial x_1 \partial x_2} + \delta Q_2 \cdot \frac{\partial^2 U}{\partial x_2^2} + \ldots\right) + \ldots$$

$$= \delta Q_1 \ (mp_1 - MP_1) + \delta Q_2(mp_2 - MP_2) + \ldots$$

Hence the whole expression, which measures the excess of satisfaction given by the second budget of expenditure over the first, is given by

$$U(q) - U(Q) = MP_1\delta Q_1 + MP_2\delta Q_2 +$$

$$+ \tfrac{1}{2}(mp_1 - MP_1)\delta Q_1 + \tfrac{1}{2}(mp_2 - MP_2)\delta Q_2 + \ldots$$

$$= \tfrac{1}{2}\Sigma(MP + mp)(q - Q).$$

Next suppose that relatively small changes in the quantities $q_1, q_2 \ldots$, to $q_1 + v_1, q_2 + v_2 \ldots$, would give the same utility at the second date as $Q_1, Q_2 \ldots$ gave at the first, that is,

$$U(q + v) = U(q_1 + v_1, q_2 + v_2 \ldots) \quad U(Q).$$

Then expanding the left-hand side, and neglecting $v_1^2, v_1v_2 \ldots$, $U(q) + \Sigma v_1 \frac{\partial U}{\partial x_1} = U(Q)$, where q_1, q_2 . . . are written for x_1, x_2 . . . after differentiating. Hence, since $\frac{\partial U}{\partial x_1} = mp_1$ etc.,

$$\Sigma vmp + U(q) - U(Q) = 0$$

$$\therefore \quad \Sigma vmp = - \tfrac{1}{2}\Sigma(MP + mp)(q - Q).$$

$$\therefore \quad \Sigma vp = - \tfrac{1}{2}\Sigma(\mu P + p)(q - Q).$$

By these assumptions an expenditure $\Sigma(q + v)p$ at the second

date gives the same satisfaction as an expenditure ΣQP at the first. Write I for the ratio of these expenditures. Then I is the sought measure of the change in the cost of living.

$$I = \frac{\Sigma(q+v)p}{\Sigma QP} = \frac{\Sigma qp - \frac{1}{2}\Sigma(\mu P + p)(q-Q)}{\Sigma QP}$$
$$= \frac{\frac{1}{2}\Sigma(Q+q)p - \frac{1}{2}\mu\Sigma P(q-Q)}{\Sigma QP}.$$

After a little rearrangement this becomes

$$I = \frac{\Sigma(Q+q)p}{\Sigma(Q+q)P} + (I-\mu)\cdot\frac{\Sigma(q-Q)P}{\Sigma(q+Q)P}.$$

Now μ, the ratio of the purchasing powers of money at the two dates, is some average of the ratios $p_1 : P_1$, $p_2 : P_2$ . . ., its indicators in different commodities, and there is no *a priori* means, from the equations, etc., on the hypotheses used, to determine it. In ordinary circumstances, μ cannot differ much from I, and the small factor $I - \mu$ is multiplied by a small fraction $\frac{\Sigma(q-Q)P}{\Sigma(q+Q)P}$; how small is indicated by the numerical examples below. It appears that to the same order of neglect already used (viz. neglect of $\delta Q_1^3 \cdot \frac{\partial^3 U}{\partial x_1^2}$, v_1^2, etc.), the second term in the equation for I is negligible, and $I = \frac{\Sigma(Q+q)p}{\Sigma(Q+q)P}$.[1]

Three illustrations are available. Take the standard budget used by the Ministry of Labour as giving the values of Q and P at the prices of 1914, and the budgets collected by the Cost of Living Committee (Cmd. 8980 of 1918) as giving q, p for urban workers, and those of the Committee on Cost of Living of Rural Workers (Cmd. 76 of 1919) as giving Q, P and q, p for rural workers.

We have—

	Urban.	Rural.		Urban.	Rural.
ΣQP	= 246·5	190·1	$I_1 = \frac{\Sigma Qp}{\Sigma QP}$	= 2·12	2·042
ΣqP	= 225·5	173·6	$I_2 = \frac{\Sigma qp}{\Sigma qP}$	2·02	2·002
ΣQp	= 521·6	388·2	$I = \frac{\Sigma(Q+q)p}{\Sigma(Q+q)P}$	= 2·07	2·022
Σqp	= 455·1	347·5			

[1] In my paper in the *Statistical Journal*, 1919, pp. 351–2. I used in effect $\Sigma vp = \frac{\Sigma qp}{\Sigma qP}\cdot\Sigma(Q-q)P$, instead of $\Sigma\frac{1}{2}\left(\mu + \frac{p}{P}\right)P(Q-q)$ as above. The results differ very little, but I now regard the earlier solution as incorrect. Mr. Bennett (*Statistical Journal*, 1920; see p. 460 note) gave $\frac{1}{2}\Sigma\mu_1\left(1+\frac{p}{P}\right)P(Q-q)$, and considered the value of μ_1 roughly afterwards.

In these cases $I = \frac{1}{2}(I_1 + I_2) = \sqrt{(I_1 I_2)}$ very nearly.

$$\text{The full formula is } I = 2{\cdot}07 + (2{\cdot}07 - \mu) \times \frac{-21}{472}$$
$$= 2{\cdot}07 + (\mu - 2{\cdot}07) \times {\cdot}04 \text{ (Urban).}$$

It is seen that if we push μ up to I_1 or down to I_2 the value of I is only affected by ·002.

A third illustration is from the Labour investigation mentioned above, where it was found that $I_1 = I_2$ almost exactly (*loc. cit.*, p. 411).

The special case where the utility of the q budget equals that of the Q budget is interesting. We have $0 = U(q) - U(Q) = \frac{1}{2}\Sigma(MP + mp)(q - Q)$. as above.

Divide by m; then $\mu = \frac{\Sigma(q - Q)p}{\Sigma(Q - q)P}$.

Also I is evidently now the ratio of the new expenditure Σqp to the old ΣQP, and identifying I with μ as in the general case, we obtain from the algebraic rules of ratios—

$$\frac{\Sigma qp}{\Sigma QP} = I = \mu = \frac{\Sigma(q - Q)p}{\Sigma(Q - q)P} = \frac{\Sigma Qp}{\Sigma qP} = \frac{\Sigma(Q + q)p}{\Sigma(Q + q)P}.$$

As in the next section, write $V_1 = \frac{\Sigma qP}{\Sigma QP}$, and $V_2 = \frac{\Sigma qp}{\Sigma Qp}$, where V_1, V_2 are measures of change in quantity; then the equations just written give $V_1 \times V_2 = 1$, which is consonant with Professor Irving Fisher's "ideal" index-number for change of quantity, viz.: $\sqrt{(V_1 \cdot V_2)}$, which should be unity in this case.

Conversely, if $V_1 \times V_2 = 1$, and again we take $I = \mu$, we have $\frac{\Sigma qp}{\Sigma QP} = \frac{\Sigma Qp}{\Sigma qP} = \frac{\Sigma(q - Q)p}{\Sigma(Q - q)P} = \frac{\Sigma(Q + q)p}{\Sigma(Q + q)P} = I = \mu$, and

$$\therefore \quad \mu = \frac{\Sigma(q - Q)p}{E(Q - q)P}, \quad \therefore \quad U(q) = U(Q).$$

We have, therefore, a simple approximate test of equality of satisfaction from two budgets.

Though there has been no collection of working-class budgets since 1920, we can still make some computations of the formulæ now given from national statistics. The Agricultural Census of 1924 gives estimates of the production of meat, eggs and milk as compared with pre-war production, and the statistics of imports are, of course, available. These can be applied to the items included in the Ministry of Labour standard budget. The national *per capita* consumption of milk and sugar were nearly

the same in 1925 as in 1913. It may be assumed that butter (depending on milk), bread and potatoes are consumed as before. The only changes shown by the statistics are—

CONSUMPTION *per capita.*

		Circa 1912.	*Circa* 1923.
Beef : Home	lbs.	27	22
Imported	,,	22	24
Mutton : Home	,,	11	7
Imported . . .	,,	13	14
Bacon, etc. : Home . . .	,,	16	19
Imported . . .	,,	14	17
Total meat .		103	103
Eggs : Home	No.	26	37
Imported	,,	56	34
Tea	lbs.	6·7	8·7

We must ignore the change in the consumption of margarine for want of information, and also assume that there is no significant change for fish, an unimportant item.

Now take the above table as giving the ratio of q to Q in 1925 to 1914 for the commodities named, and reconstruct the Ministry of Labour budget with these changes, so that Q, P apply to July 1914 and q, p to July 1925. The values of p : P are given in the *Labour Gazette.*

We obtain—

$$
\begin{array}{lll}
 & d. & \\
\Sigma QP = 225{\cdot}5 & I_1 = \Sigma Qp \div \Sigma Qp = 1{\cdot}674 & V_1 = \Sigma QP \div \Sigma QP = 1{\cdot}017 \\
\Sigma Qp = 377{\cdot}6 & I_2 = \Sigma qp \div \Sigma qP = 1{\cdot}666 & V_2 = \Sigma qp \div \Sigma Qp = 1{\cdot}012 \\
\Sigma qP = 229{\cdot}4 & \tfrac{1}{2}(I_1 + I_2) = 1{\cdot}670 = \sqrt{(I_1 I_2)} & \sqrt{(V_1 V_2)} = 1{\cdot}014 \\
\Sigma qp = 382{\cdot}1 & \Sigma(Q + q)p \div \Sigma(Q + q)P = 1{\cdot}670 & \\
I = 1{\cdot}670 + (I - \mu) \times {\cdot}0085 & &
\end{array}
$$

$$
\text{Gain of satisfaction} = \tfrac{1}{2}\Sigma(MP + mp)(q - Q) = \tfrac{1}{2}(4{\cdot}1M + 4{\cdot}5m)
$$

$$
= \frac{m}{2}(4{\cdot}1\mu + 4{\cdot}5) = 6m, \text{ approx., where } \mu = I,
$$

that is, 6*d.* multiplied by the marginal utility of 1*d.* in 1925.

The difference between I_1 and I_2 is less than the essential inaccuracy in the computation, and it is therefore unlikely that a new collection of budgets would by any formula lead to any significant modification of the measurement of the change in cost of living so far as food is concerned.

NOTE.—M. Ragnar Frisch (*Sur un problème d'économie pure :* Norsk Matematisk Forenings Skrifter, Serie I, Nr. 16, 1926) gives a formula for expressing the marginal utility of money which we can apply to the relationship between I

and μ obtained above. He argues on *a priori* grounds that, if z expresses the price level at any time and r the expenditure of an individual, the marginal utility of money is equatable to $\frac{1}{z} \cdot g\left(\frac{r}{z}\right)$, where g is an unknown function. He finds that the simplest form of g, consistent with certain conditions he lays down, is $g(r) = C \div \log\left(\frac{r}{a}\right)$, where C is a constant and a is a minimum of expenditure.

In our notation write $R = \Sigma PQ$, and $r = \Sigma pq$ for expenditure at two dates, and $z = I = (\Sigma pq + \Sigma pv) \div \Sigma PQ$ for the price level (whose expression M. Frisch leaves undecided) at the second date, while unity is that at the first.

$$\text{Then } \mu = M \div m = g(R) \div \frac{1}{I} g\left(\frac{r}{I}\right) = I \log\left(\frac{r}{Ia}\right) \div \log\left(\frac{R}{a}\right).$$

Write $R = \alpha a$, and observe that $IR = r + \Sigma pv$.

$$\mu = I \log\left\{\alpha\left(1 - \frac{\Sigma pv}{IR}\right)\right\} \div \log \alpha = I - \frac{\Sigma pv}{R \log \alpha},$$ if we neglect as before squares of $\Sigma pv \div \Sigma PQ$.

Now $\Sigma pv = \frac{1}{2}\Sigma\{(\mu P + p)(Q - q)\}$ (p. 225), and therefore

$$I - \mu = \frac{\Sigma\{(\mu P + p)(Q - q)\}}{2 \log \alpha \,.\, \Sigma PQ}.$$

The complete equation for I, from p. 226, is then

$$I = \frac{\Sigma(Q + q)p}{\Sigma(Q + q)P} + \frac{\Sigma\{(\mu P + p)(Q - q)\}}{2 \log \alpha\, \Sigma PQ} \cdot \frac{\Sigma(q - Q)P}{\Sigma(q + Q)P}.$$

Here α is the ratio of the expenditure at the first date to a "le minimum d'existence au niveau des prix donné" (*loc. cit.*, p. 19). We must postulate that α is sensibly greater than unity, for otherwise the marginal utility, $C \div \log \alpha$, is indefinitely great. For convenience of analysis take $\alpha = e = 2{\cdot}72\ldots$, and $\log \alpha = 1$, and use the numerical values for the urban budgets (p. 226 above). Then $I - \mu = \mu \times {\cdot}043 + {\cdot}133$ from the formula above, while $I = 2{\cdot}07$. Hence $\mu = 1{\cdot}86$ and is definitely less than I. But the complete formula for I becomes

$$I = 2{\cdot}07 + {\cdot}21 \times \left(-\frac{{\cdot}21}{472}\right) = 2{\cdot}07 - {\cdot}0093,$$

and the value $2{\cdot}07$ is reduced insignificantly. This numerical relationship depends, however, on the value arbitrarily taken for α. If the arbitrary α is taken to be small, the difference between I and μ becomes very small.

Notice that if $U(q) = U(Q)$, so that Σpv is zero, I and μ are identical.

4. Index-numbers of Quantity

(*a*) *Change in standard of living.*—Give P, Q, p, q, the same meaning as before, and write $E = \Sigma PQ$, $e = \Sigma pq$.

Then $V_1 = \dfrac{\Sigma Pq}{\Sigma PQ} = \dfrac{\Sigma E \,.\, \frac{q}{Q}}{\Sigma E}$, and $V_2 = \dfrac{\Sigma pq}{\Sigma pQ} = \dfrac{\Sigma e}{\Sigma e \,.\, \frac{Q}{q}}$ are possible measurements of the change of standard, being weighted averages of the individual changes $q : Q$, and are analogous to I_1 and I_2 used above.

We are not justified in making the assumptions on which Section 1 was based, and the analysis of that Section is not

applicable. Nor can we use any general conception of utility, for it will be found that none of the equations of Section 3 afford any absolute measurement of U (total utility) or of the ratio of two values of U.

It appears to be only possible either to say that the sought measurement is symmetrically related to V_1, which assigns the relative values of the units of different commodities as at the first date, and to V_2, which assigns those at the second date; or to deduce the quantity index from the price index from a formula advocated in a different connection by Professor Irving Fisher, viz.

1st expenditure $\times$ Quantity index $\times$ Price index = 2nd expenditure.

The assumption here that the quantity and price index-numbers should be independent of each other is not easy to justify.

It is perhaps unnecessary to discuss the rival merits of the arithmetic and geometric means of V_1 and V_2 in this case, since they are likely to agree within the limits of inevitable error.[1] On the second method, using the index-number for prices already found, we have—

$$\text{Quantity index} = \frac{e}{E} \times \frac{\Sigma(Q+q)P}{\Sigma(Q+q)p} = \frac{1+V_1}{1+\frac{1}{V_2}} = \frac{V_2(1+V_1)}{1+V_2}.$$

For the three budgets instanced above these formulæ yield very nearly the same results.

	1918. Base July 1914.		1925. Hypothetical.
	Urban.	Rural.	p.
V_1	·915	·913	1·0172
V_2	·872	·894	1·0119
$\frac{1}{2}(V_1+V_2)$ . . .	·8935	·9035	1·0145
$\sqrt{(V_1V_2)}$ . . .	·8932	·9035	1·0145
$\frac{V_2(1+V_1)}{1+V_2}$ . . .	·892	·9012	1·0145

Thus from 1914 to 1918 there was a fall in standard of living thus measured of about 10 per cent., though the fall in calorie

[1] Professor Irving Fisher uses $\sqrt{(I_1I_2)}$ for prices and $\sqrt{(V_1V_2)}$ for quantities. These satisfy the "transitive" condition (p. 220 above) and the equation just given.

value (urban budgets) was found to be only 3 per cent. From 1914 to 1925 the rise in standard was about $1\frac{1}{2}$ per cent.

(*b*) *Index-number of production.*—Here we get no help at all from Sections 1 or 3. We cannot assume that there is any utility function of unchanged form for a nation, or that there is any general force increasing production of commodities of all kinds, modified by special variations subject to a law of error. Even if we had complete information we should still have to select an average of V_1 and V_2 on grounds of convenience rather than of principle, and our only security would come from approximate equality of the different relevant averages. But in fact the more important difficulties are found in the nature of the material rather than in the method of averaging.

The common form of an index-number of production is $V_1 = \Sigma E\frac{q}{Q} \div \Sigma E$. Here the values $E_1, E_2 \ldots$ are taken from a Census of Production for as many groups of commodities as can be treated separately. The fundamental difficulties are that there is no unit of the product of manufacture, except in the simplest cases, and that annual records are available only for a limited number of raw materials and of partly manufactured products. If the available ratios $q : Q$ bore a constant relation to the essential changes in the volume of production, for example, if the output of the woollen industry were proportional to the consumption of yarn, the index V_1 would, as a weighted average, have a precision greater than the precision of its constituents. But there is good evidence, for example, in the engineering industries, that in recent years the intrinsic value of the products have increased more rapidly than has the consumption of the measurable materials. The 1924 Census of Production affords some means of testing this, but it is already evident that it will be a very difficult matter to match it with the 1907 Census for this purpose. It will, however, be at once possible to calculate V_2 as well as V_1, since the 1924 Census gives the relative values of $e_1, e_2 \ldots$

The Board of Trade, in revaluing Imports and Exports of each year at the prices of the previous year uses the form V_1 for quantity, but I_2 for prices.[1] More consistent and logical results would be obtained by using $\sqrt{(V_1V_2)}$ and $\sqrt{(I_1I_2)}$. There is a danger, which the Board of Trade avoids as far as possible, in combining the annual results thus obtained by the "chain"

[1] The price index-number is apparently deduced from the quantity index-number. Thus $\Sigma pq = \Sigma PQ \times V_1 \times I = \Sigma PQ \times \frac{\Sigma Pq}{\Sigma PQ} \times I$. Hence $I = \frac{\Sigma pq}{\Sigma Pq} = I_2$.

method. An extreme case of the error that might be introduced is given in the following hypothetical example :—

Commodity.	1st Year.		2nd Year.		3rd Year.	
	Quantity. $_1q$.	Price. $_1p$.	Quantity. $_2q$.	Price. $_2p$.	Quantity. $_3q$.	Price. $_3p$.
A . . .	6	100	2	200	6	100
B . . .	7	100	10	90	7	100
C . . .	8	100	9	80	8	100

$$\Sigma_1 q \cdot {}_1p = 2100 = \Sigma_1 q \cdot {}_3p = \Sigma_3 q \cdot {}_1p = \Sigma_3 q \cdot {}_3p;$$
$$\Sigma_1 q \cdot {}_2p = 2470 = \Sigma_3 q \cdot {}_2p; \quad \Sigma_2 q \cdot {}_2p = 2020;$$
$$\Sigma_2 q \cdot {}_1p = 2100 = \Sigma_2 q \cdot {}_3p.$$

By the chain method the index-number of quantity in the third year compared with the first is

$$\frac{\Sigma_2 q \cdot {}_1p}{\Sigma_1 q \cdot {}_1p} \times \frac{\Sigma_3 q \cdot {}_2p}{\Sigma_2 q \cdot {}_2p} = \frac{2100}{2100} \times \frac{2470}{2020} = 1{\cdot}22,$$

while it evidently should be unity.

If the double method were applied to both years we should have

$$\sqrt{\left(\frac{\Sigma_2 q \cdot {}_1p}{\Sigma_1 q \cdot {}_1p} \times \frac{\Sigma_2 q \cdot {}_2p}{\Sigma_1 q \cdot {}_2p}\right)} \times \sqrt{\left(\frac{\Sigma_3 q \cdot {}_2p}{\Sigma_2 q \cdot {}_2p} \times \frac{\Sigma_3 q \cdot {}_3p}{\Sigma_2 q \cdot {}_3p}\right)}$$
$$= \sqrt{\left(\frac{2100}{2100} \times \frac{2020}{2470}\right)} \times \sqrt{\left(\frac{2470}{2020} \times \frac{2100}{2100}\right)} = 1,$$

as it should in this case.

However it is not generally equal to $\sqrt{\left(\frac{\Sigma_3 q \cdot {}_1p}{\Sigma_1 q \cdot {}_1p} \times \frac{\Sigma_3 q \cdot {}_3p}{\Sigma_1 q \cdot {}_3p}\right)}$, as it should, if the double method is applied to the first and third years.

Results obtained by the chain method therefore need to be frequently tested by reworking on alternative methods, except those based on the method of the Board of Trade's general index-number of wholesale prices, viz.: a geometric mean of relatives.

5. CAUSES OF ERROR IN INDEX-NUMBERS

Quite apart from misjudgment in the choice of formula, there are numerous sources of error in the construction of index-numbers, which may be classified as follows :—(*a*) Inaccuracy of price (or quantity) relatives; (*b*) Error due to sampling; (*c*) Errors in weights; (*d*) Omission of relevant classes; (*e*) Non-

coincidence of the field of selection with the objective; (*f*) Inappropriateness of the relative to the weight. Discussion of these errors in relation to I_1 can be applied *mutandis mutatis* to V_1.

(*a*) The fundamental difficulty in forming index-numbers of prices is in securing actual market quotations at which the bulk of the sales are made for commodities of precisely the same grade over a period of time. The trouble is present in apparently the simplest cases, such as wheat and pig iron, and it is more acute with articles of a high stage of manufacture. Averages based on import and export records are specially liable to error. When there is a definite change of grade or kind of a commodity, replacement can be effected in a chain index-number. The resulting error in the index-number can be expressed in terms of the typical error of the relative as under (*c*).

(*b*) The error of sampling was discussed in Section 2 for the unweighted arithmetic average. It is still present in a modified form in weighted index-numbers, since it is never practicable to cover the whole field of investigation, but its effect needs a troublesome special analysis for each case.

(*c*) In the formula $\frac{\Sigma Wr}{\Sigma W}$, where r is the price or quantity relative and W the weight applied to it,[1] suppose the r's to be correct, but that $W_1(1+\varepsilon_1)$, $W_2(1+\varepsilon_2)$ . . . are erroneously taken instead of the correct W_1, W_2 . . . Write ε for a typical value (mean or mean-square or probable error) of $\varepsilon_1, \varepsilon_2$ . . ., and write σ_w for the ratio of the standard deviation of the W's (regarded as a frequency group), to the average of the W's; and write σ_r for the ratio of the standard deviation of the r's to their average. Then if n is the number of commodities, and terms involving correlation are neglected, the resulting relative error in the index may be written $E = \frac{\varepsilon}{\sqrt{n}}\sqrt{1+\sigma_w^2}\,.\,\sigma_r$.

For example, in a study of the Board of Trade general index-number for December 1925, $n = 66$ (the number of commodities grouped for a special purpose),

$$\sigma_w = 1,\ \sigma_r = \cdot 22,\ \text{whence } E = \varepsilon \times \cdot 038.$$

If now we suppose that the weights were as likely as not to be 10 per cent wrong, so that $\varepsilon = \frac{1}{10}$ is the probable error, then the

[1] $I_1 = \frac{\Sigma Qp}{\Sigma QP} = \frac{\Sigma QP\,.\left(\frac{p}{P}\right)}{\Sigma QP}$. Here $W = QP$, and $r = \frac{p}{P}$.

$V_1 = \frac{\Sigma Pq}{\Sigma PQ} = \frac{\Sigma PQ\left(\frac{q}{Q}\right)}{\Sigma PQ}$. Here $W = PQ$ and $r = \frac{q}{Q}$.

probable error of E from this cause is ·0038, and the index, stated as 150, may be written 150 (1 ± ·0038) = 150 ± ·6; if $\varepsilon = \frac{1}{20}$, as 150 ± ·3, etc. A plausible value for ε can often be assigned by study of the data.

If, to return to (*a*) we take W as correct, and *r* as subject to an error *e*, then the resulting error in the average may be written

$$E = \frac{e}{\sqrt{n}} \sqrt{(1 + \sigma_w^2)(1 + \sigma_r^2)} = e \times \cdot 18,$$

and if *e* is taken as $\frac{1}{20}$, the index may be written 150 (1 ± ·009) = 150 ± 1·3.[1]

More serious errors are made by attaching the wrong importance to a group containing commodities whose price movements are correlated, and these can best be tested arithmetically. Thus it is doubtful what is the relative importance of food and materials in a general index-number. The Board of Trade assigns 53 : 97. The effect of changing this proportion can be thus shown :—

Board of Trade Wholesale Price Index, Dec. 1925

	Index.	Weights.	Products.	Weights.	Weights.
Food . .	163	53	8639	50	40
Materials .	146	97	14162	50	60
		150	22801	100	100
Index .			152	154½	153

Again, the official German index-number attached the overwhelming weight 83 (in December 1925) to Home Products, giving only 17 to imports. The price indices were respectively 114 and 161, and the complete index 121½. If the weights assigned for England by the Board of Trade are applied to the detailed entries, however, the index is raised to 148.

(*d*) In some index-numbers a whole group is omitted for want of data. Suppose P_1 to be the index for the commodities included, P_2 the unknown index for the excluded, and P the true complete index, and the ratio of the weights of the included to the excluded is $\alpha : \beta$ ($\alpha + \beta = 1$), then

$$P = \alpha P_1 + \beta P_2 = P_1 + \beta(P_2 - P_1).$$

Thus the Belgian index-number excludes meat. If the Board of Trade excluded the meat group (weight 17 in 150), the resulting

[1] For proof and completion of the formulæ see *Elements of Statistics*, pp. 320–1.

number P_1 for December 1925 would have been 150 instead of $P = 153$. P_2 for meat is 175, and the formula becomes

$$153 = 150 + \tfrac{17}{150}(175 - 150).$$

Errors such as these and in the latter part of (*c*) account for many of the discrepancies observed between index-numbers which appear to be intended to represent the same movements.

(*e*) Here are included such gross errors as the application of wholesale price index-numbers to retail prices, of taking a number based only on Imports or on Exports as representative for all goods, or of confusing the retail food with the Cost of Living index.

(*f*) The outstanding instance of the inappropriateness of the quantity (or price) relation to the weights is to be found in indices of production, as explained in Section 4.

The errors in (*e*) and (*f*) cannot be measured. But a rough estimate can often be made of (*a*), (*b*), (*c*), (*d*) and of their combined effect. These four classes of errors are not independent of each other; to some extent (*b*), (*c*) and (*d*) are different aspects of the same thing. A general impression from the study of many details is that an index-number, when properly defined and related to an objective, is liable to a probable error of at least 2 per cent. This error is more important than any arising from the wrong choice of the form of a symmetric mean.

6. Wage Index-numbers

The compilation of an index-number to measure the change in the average wages of a working population, though it involves many of the methods already discussed, presents certain difficulties and introduces new conceptions which are best elucidated by a special notation.

Write $N_1, N_2 \dots$ for the numbers in the different industries or occupations, and $W_1, W_2 \dots$ for their average wages in the basic year, and $n_1, n_2 \dots w_1, w_2 \dots$ for numbers and wages in another year. Write $W = \frac{\Sigma NW}{\Sigma N}$ and $w = \frac{\Sigma nw}{\Sigma n}$ for the general averages of wages at the two dates.

Further, write $R_1 = \frac{\Sigma Nw}{\Sigma NW}$, and $R_2 = \frac{\Sigma nw}{\Sigma nW}$.

Then the main objective is to evaluate $w \div W$, but we may also wish to find R_1 and R_2, which represent the movement due to change of wages alone without reference to any changes in relative numbers in the industries.

The form R_1 is necessarily used if we have only one record of numbers. It was also explicitly used by Mr. G. H. Wood (*Statistical Journal*, 1909, pp. 102–3) for measuring wages of "Workman of Unchanged Grade," and it is the form by which the Ministry of Labour computes its "general course of wages." The form R_2 was used among other measurements by the 1925-6 Coal Commission, to show the effect of the increasing number of less-skilled men in mines, whose wages had increased more rapidly than those of the fully skilled. They found $R_2 = 1{\cdot}642$, while $R_1 = 1{\cdot}635$, and $w \div W = 1{\cdot}61$ (*Report*, p. 280).

In the general problem it is useful to separate the effects of the change due to shifting of numbers from that due to increase of wage-rates. For this purpose write $n_1 = N_1(1 + p_1)$, $n_2 = N_2(1 + p_2) \ldots$, $\Sigma n = (1 + \bar{p})\Sigma N$, and $w_1 = W_1(1 + r_1)$, $w_2 = W_2(1 + r_2) \ldots$

In fact the p's are computed from the Population Census, and the r's from the wage-changes recorded by the Ministry of Labour, on different methods and with different precision. Also we know the value of $\bar{p}$, but there is no corresponding check on the weighted average of the r's.

Further, write $E_1 = \dfrac{N_1 W_1}{\Sigma NW}$, and similar values for $E_2, \ldots$, and finally write $P = \dfrac{\Sigma E(1 + p)}{1 + \bar{p}}$.

$E_1, E_2 \ldots$ represent the relative importance of the wage-bills in the different industries. P measures the change due to shifting of population alone.

$$\text{Then } \frac{w}{W} = \frac{\dfrac{\Sigma nw}{\Sigma n}}{\dfrac{\Sigma NW}{\Sigma N}} = \frac{\dfrac{\Sigma nW}{\Sigma NW}}{\dfrac{\Sigma n}{\Sigma N}} \times \frac{\Sigma nw}{\Sigma nW} = \frac{\Sigma E(1 + p)}{1 + \bar{p}} \times R_2 = P \times R_2.$$

$$\text{Here } R_2 = \frac{\Sigma E_1(1 + r_1)(1 + p_1)}{\Sigma E_1(1 + p_1)}, \text{ while } R_1 = \frac{\Sigma E_1(1 + r_1)}{\Sigma E_1}.$$

R_2 is greater than R_1, if increase of numbers $(1 + p)$ is positively correlated with increase of wages $1 + r$, *i.e.* if the population moves to occupations where wages are rising fastest.

P is greater than 1, if $1 + p$ is positively correlated with W, *i.e.* if the population moves to occupations where wages were higher.

Movements in both these senses have generally taken place during the sixty years or more for which there are adequate records.

The values of these quantities for the United Kingdom in

1924, when 1914 is taken as the base year, are approximately as follows :—[1]

	Males.	Females.	All.
$1 + p$	1·05	·98	1·03
P	1·02	·99	1·02
R_1	1·904	2·12	1·94
R_2	1·906	2·12	1·943
$P \times R_2$	1·95	2·10	1·98

For women the movement is confused by the transfer from domestic service to industry and from industry to salaried work (not included in the computation).

For men R_2 is brought down by the relatively small increase in coal-mining wages where the increase in numbers was considerable. R_1 is greater than the Ministry of Labour's computation (1·70 to 1·75) because it is based on average earnings in the industries, such as are shown in the Wage Census of 1924; these have increased more rapidly than rates of wages, owing to more piece-work and facilities for earning, and also to a shifting of numbers within the industries, which could not be allowed for in the computation of P.

These numbers all relate to earnings in the normal week. Hourly rates have increased more. For annual earnings we should correct for changes in unemployment, holidays and sickness.

The change in *aggregate* wages is measured by

$$\frac{\Sigma nw}{\Sigma \mathrm{NW}} = \mathrm{P} \times \mathrm{R}_2 \times (1 + \bar{p}) = 2{\cdot}04$$

in the United Kingdom, or 1·96 if South Ireland is excluded at the second date.

A. L. Bowley

Note.—The wage-index of the London and Cambridge Economic Service was only intended to be an "indicator" based on returns which could be obtained monthly, but it has obtained an unexpected publicity. It is of the form $\frac{1}{11}\Sigma\frac{w}{\mathrm{W}} \times 100$. Though it is apparently unweighted, the eleven industries or occupations included, viz. Bricklayers, Bricklayers' Labourers, Fitters, Engineering Labourers, Compositors, Railwaymen, Dockers, Coal-miners, Cotton Operatives, Woollen Operatives and Agricultural Labourers, were chosen to represent in reasonable proportion skilled and unskilled, time and piece rates, men and women, town and country. But in fact the separate entries are either weighted or depend on changes common to a whole industry, so that its form may be regarded as that of R_1. In the Economic Journal, 1928, p. 4, Professor Clay writes that Engineering has a weight of only 1 in 9; in fact it has a weight of 2 in 11. This index for 1924 was only 179, for it intentionally neglects all population movements, whether within an industry or between industries.

[1] Based on *The National Income*, 1924, Bowley and Stamp, Chapter IV.

AN ANALYSIS OF SUPPLY

I

§ 1. For the purposes of this article I define the normal supply price of any quantity of output as the price which will just suffice to call out a regular flow of that quantity when the industry under review is fully adapted to producing that quantity. Prima facie the supply price of an industry may fall, remain stationary or rise, as the output of the industry increases. According as it does one or other of these things, the industry will be said respectively to obey the law of decreasing, constant or increasing supply price.[1] The same industry may, of course, obey one of these laws in respect of some quantities of output and another in respect of other quantities. It is proposed to study generally the way in which the relation between variations in normal supply price and variations in quantity of output is determined.

§ 2. By the relation between variations in normal supply price and variations in output is meant, not necessarily the relation which does subsist between these things in history, but the relation which would subsist subject to the condition *other things being equal*. In real life, with the general advance of knowledge, new methods of production are being continually introduced and new technical appliances invented. Some of these changes occur, so to speak, "spontaneously"; that is to say, they are due to factors which would operate *even though the output of the industry remained constant*. Others are the result of the changes in the scale of output, being called out in response to changes in demand. Of course, in practice, it may often be impossible to say whether a particular invention in, say, the process of steel manufacture is spontaneous in the above sense or not spontaneous. Logically, however, the distinction is quite clear. In the following pages spontaneous changes are definitely

[1] This phraseology has an advantage over "increasing, constant and diminishing returns" or "decreasing, constant and increasing" cost, because in some circumstances average returns will be increasing and marginal returns decreasing in respect of the same output; and similarly with average and marginal costs. With increasing, constant and decreasing supply price there is no corresponding ambiguity.

ruled out of consideration. Therefore an industry may display continuously falling supply price through a long series of years, and yet may not, in any sense relevant to my problem, be operating under conditions of decreasing supply price.[1] An industry is said to conform to increasing, constant or decreasing supply price when, *apart from spontaneous changes—i.e.* changes in technique not due to changes in output—increase of output would be associated, as the case may be, with increasing, constant or decreasing supply prices.

§ 3. Most industries are made up of a number of firms, of which at any moment some are expanding, while others are declining. Marshall, it will be remembered, likens them to trees in a forest. Thus, even when the conditions of demand are constant and the output of an industry as a whole is correspondingly constant, the output of many individual firms will not be constant. The industry as a whole will be in a state of equilibrium; the tendencies to expand and contract on the part of the individual firms will cancel out; but it is certain that many individual firms will not themselves be in equilibrium and possible that none will be. When conditions of demand have changed and the necessary adjustments have been made, the industry as a whole will, we may suppose, once more be in equilibrium, with a different output and, perhaps, a different normal supply price; but, again, many, perhaps all, the firms contained in it, though their tendencies to expand and contract must cancel one another, will, as individuals, be out of equilibrium. This is evidently a state of things the direct study of which would be highly complicated. Fortunately, however, there is a way round. Since, when the output of the industry as a whole is adjusted to any given state of demand, the tendencies to expansion and contraction on the part of individual firms cancel out, they may properly be regarded as *irrelevant* so far as the supply schedule of the industry as a whole is concerned. When the conditions of demand change, the output and the supply price of the industry as a whole must change in exactly the same way as they would do if, both in the original and in the new state of demand, all the firms contained in it were individually in equilibrium. This fact gives warrant for the conception of what I shall call the *equilibrium firm*. It implies that there *can* exist some one firm, which, whenever the industry as a whole is in equilibrium, in the sense that it is producing a regular output y in response to a normal supply price p, will itself also

[1] Geometrically the continuous fall in costs would be represented by a lowering of the whole supply curve.

individually be in equilibrium with a regular output x_r.[1] The conditions of the industry are compatible with the existence of such a firm; and the implications about these conditions, which, whether it in fact exists or not, would hold good if it did exist, must be valid. For the purpose of studying these conditions, therefore, it is legitimate to speak of it as actually existing. For any given output, then, of the industry as a whole, the supply price of the industry as a whole must be equal to the price, which, with the then output of the industry as a whole, leaves the equilibrium firm in equilibrium. The industry, therefore, conforms to the law of increasing, constant or decreasing supply prices according as the price which leaves the equilibrium firm in equilibrium increases, remains constant, or decreases with increases in the output of the industry as a whole. In industries which consist, not of many firms, but of one firm only, the industry as a whole and the equilibrium firm are, of course, identical, and there are no firms other than the equilibrium firm. The main part of this article is concerned with what are ordinarily spoken of as competitive conditions; *i.e.* conditions such that the outputs of the individual firms are small relatively to the output of the whole industry, which implies that x_r, the output of our equilibrium firm, is small relatively to y. The case of an industry consisting of one firm only will also be studied briefly in the fourth section. But the difficult intermediate case of an industry in which x_r is neither small relatively to y nor yet equal to y—a case involving some measure of indeterminateness—will be left out of account. It is assumed throughout that outsiders are not

[1] Marshall's statements about his "representative firm" show that this is conceived as an "equilibrium firm." But it is also something more. It is a firm of, in some sense, average size. Marshall pictures it as a "typical" firm, built on a scale to which actual firms tend to approximate; for some purposes he suggests that it might be well to picture to ourselves several different typical firms, one, for example, in the company form, another, probably smaller, in the private business form. That this conception is appropriate to actual conditions is well shown by the studies of the sizes of a number of actual businesses carried out in 1914 by Sir Sydney Chapman and Mr. Ashton. They conclude: "Generally speaking, there would seem to exist in industries, or branches of industries, of adequate size, under given sets of conditions, a typical or representative magnitude to which businesses tend to grow, typical proportions between their parts and typical constitutions. . . . As there is a normal size and form for a man, so, but less markedly, are there normal sizes and forms of businesses." (The sizes of businesses mainly in the textile industry. *Statistical Journal*, 1914, p. 512.) For my more limited purpose, however, it is not necessary to postulate that there is any representative or typical size of firms. Firms might be of all varieties of size, not concentrated about any norm. All that is required is that one firm is—or, rather, that the conditions are such as to make it possible for one firm to be an "equilibrium firm" in the sense defined above.

excluded from the industry under review by legal rules or clubbing devices.

II

§ 4. Marshall's discussion of internal and external economies has made familiar in a general way the idea that the production costs of an individual firm in a many-firm industry sometimes depend, not on the size of its own output only, but also on that of the industry as a whole. This idea needs, however, to be set out in precise form. Three stages may be distinguished. In the simplest stage the individual firm's costs depend solely upon its own output. There are no external economies or diseconomies, and such internal economies or diseconomies as there are are wholly unaffected by variations in the scale of the industry as a whole. If we write y for the output of the industry as a whole and x_r for the output of the equilibrium firm, the money costs of the equilibrium firm are measured by $F_r(x_r)$. In the next stage the individual firm's money costs consist of two parts, one depending on the size of its own output, the other on that of the output of the whole industry. We may call the former, if we will, internal costs, the latter external costs. The latter will consist of the firm's expenditure on the materials, machinery and so on which it buys, and the price of which will vary with variations in the demand for them on the part of the industry as a whole. Here the money costs of the equilibrium firm are measured by $F_r(x_r) + \frac{x_r}{y}\psi(y)$. In the third stage the relation between costs and the two sorts of output are more complex. Here it is no longer proper to regard the individual firm's money costs as consisting of two separate and independent parts. These costs will undergo different variations in consequence of a given change in its output according to the level at which the output of the industry as a whole stands; and they will undergo different variations in consequence of a given change in the output of the industry as a whole according to the level at which the individual firm's own output stands. The costs of the equilibrium firm are measured by $F_r(x_r,y)$. This last formula, which is a general one, of course includes the two simpler formulæ as special cases. It will, therefore, be convenient in the first instance to conduct our analysis by means of it.

§ 5. Let y be the output of an industry as a whole; x_r the output of the equilibrium firm; $F_r(x_r,y)$ the total costs of the equilibrium firm; and p the supply price of the industry's product. The following quantities have then to be distinguished.

First, the *marginal additive cost* to the equilibrium firm, *i.e.* the difference made to the total costs of that firm by increasing its output from x_r to $(x_r + \Delta x_r)$, the output of the other firms remaining unchanged,

$$= \frac{\partial F_r(x_r,y)}{\partial x_r} + \frac{\partial F_r(x_r,y)}{\partial y}.$$

Secondly, the *marginal substitute cost* to the equilibrium firm, *i.e.* the difference made to the total costs of that firm by increasing its output from x_r to $(x_r + \Delta x_r)$, the output of the industry as a whole remaining unchanged (*i.e.* that firm's increase being balanced by an equal decrease elsewhere),

$$= \frac{\partial F_r(x_r,y)}{\partial x_r}.$$

Thirdly, the average cost to the equilibrium firm

$$= \frac{F_r(x_r,y)}{x_r}.$$

§ 6. When a firm is considering what difference will be made to its total costs by adding to or subtracting from its output a small increment, it will measure the difference by marginal additive cost if it reckons that the output of other firms will not be altered in consequence of its action, and by marginal substitute cost if it reckons that other firms will be driven by its expansion to contract their output correspondingly, so that the output of the whole industry, including itself, will be unaltered. It may reckon that something intermediate between these two things will happen, in which case it will look to something intermediate between marginal additive cost and marginal substitute cost. If the total cost to any one firm producing a given output is the same, whatever quantity other firms are producing, these two sorts of marginal cost coincide. In any event, so long as the output of the industry as a whole is large relatively to the output of any one firm, they are not likely to differ very much. The technique of the discussion will be slightly different according as we suppose that the equilibrium firm reckons that a small increase in its output would involve an equal, nil, or intermediate addition to the output of the industry as a whole, but no difference will be made to the broad result. Since, therefore, the analysis is simplest if the equilibrium firm thinks of small changes in its output as involving equal and opposite changes in the output of its competitors, I shall proceed on the assumption that it in fact does this. Hence, so long as we are considering many-firm

industries, no further reference will be made to marginal additive cost; and the term marginal cost will be used without adjective to signify marginal substitute cost, namely, $\frac{\partial_r F(x_r,y)}{\partial x_r}$.

§ 7. It is then easy to see that, if the supply price of the industry were less than the marginal cost of the equilibrium firm, sales at the supply price would involve a loss to it and it would tend to contract. If the supply price were greater than the marginal cost to the equilibrium firm, that firm would gain by expanding at the expense of other firms, because, while the cost of its old output would still be covered by the selling price—which would be unchanged, since aggregate output is unchanged—the cost of its new output would be more than covered.[1] Hence, in neither case would the equilibrium firm be in equilibrium. Since then, *ex hypothesi*, it must be in equilibrium, the supply price of the industry must be equal to the marginal cost of the equilibrium firm. That is,

$$p = \frac{\partial F_r(x_r,y)}{\partial x_r}.$$

§ 8. If the supply price were less than the average cost of the equilibrium firm, it is obvious that that firm would be making a loss and, therefore, would tend to contract, thus belying its nature as an equilibrium firm. Therefore, the supply price cannot be less than the average cost of the equilibrium firm. Again, if the supply price is greater than the average cost of the equilibrium firm, outsiders will be tempted to come into the industry, forming themselves into similar firms and thus increasing the producing capacity of the industry, until the supply price of an output y is no longer in excess of the average costs of the equilibrium firm. Therefore the supply price cannot be greater than the average costs of the equilibrium firm. Hence the supply price is equal to the average costs of the equilibrium firm,[2] *i.e.*

$$p = \frac{F_r(x_r,y)}{x_r}.$$

§ 9. Expressed in words, this condition and the preceding condition together state that the normal supply price of the

[1] The argument here would have a slightly different form if marginal additive cost were the relevant form of marginal cost, but the result would be the same. Cf. *post*, footnote to § 20.

[2] It will be noticed that neither the preceding argument nor the condition set out in § 3, that the tendency of the various non-equilibrium firms to expand and to contract must balance one another, necessarily implies that the supply price is equal to the average cost *of the industry as a whole*.

product of a many-firm industry is, in respect of all quantities of output, equal both to the marginal cost and to the average cost of the equilibrium firm; cost being understood, of course, in the sense of money cost. These two conditions are fundamental and of general application. The resultant equality

$$\frac{\partial F_r(x_r,y)}{\partial x_r} = \frac{F_r(x_r,y)}{x_r}$$

can also be derived directly from the proposition that, when y is given, x_r must be such as to make $\frac{F_r(x_r,y)}{x_r}$ a minimum.

§ 10. There are three sorts of equilibrium, unstable equilibrium, neutral equilibrium and stable equilibrium. A system is in stable equilibrium if, when any small disturbance takes place, forces come into play to re-establish the initial position; it is in neutral equilibrium if, when such a disturbance takes place, no re-establishing forces, but also no further disturbing forces are evoked, so that the system remains at rest in the position to which it has been moved; it is in unstable equilibrium if the small disturbance calls out further disturbing forces which act in a cumulative manner to drive the system away from its initial position. A ship with a heavy keel is in stable equilibrium; an egg lying on its side in neutral equilibrium; an egg poised on one of its ends in unstable equilibrium. Obviously for practical purposes unstable equilibrium is no equilibrium at all: its presence would involve the system running down to one in which the industry consists of a single firm. In order that the equilibrium may be neutral we require the further condition that $\frac{\partial F_r(x_r,y)}{\partial x_r}$ is constant over a certain range: in order that it may be stable, the further condition that

$$\frac{\partial^2 F_r(x_r,y)}{\partial x_r^2} > 0.$$

§ 11. Let us now consider in turn the three cases distinguished in § 4. In the simplest of these, when the costs of the equilibrium firm are dependent only on its own output and not at all on the output of the industry as a whole, the expression $F_r(x_r,y)$ degrades to $F_r(x_r)$. The two conditions of equilibrium become

$$p = F_r'(x_r) \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (1)$$

$$p = \frac{F_r(x_r)}{x_r} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (2)$$

and the condition that the equilibrium shall be neutral or stable becomes $F_r''(x_r) = > 0$ . . . . (3).
In a many-firm industry condition (3) in conjunction with condition (1) rules out the law of decreasing supply price in respect of outputs equal to or greater than what is being actually sold. For, if that law holds for the industry as a whole, it must hold for some individual firm belonging to it, and such a firm, once getting an accidental start, would cumulatively undersell and oust all the others. Condition (3) is not, however, really necessary to exclude the law of decreasing supply price. For conditions (1) and (2) in conjunction exclude both this law and also the law of increasing supply price. This is easily proved. The two conditions together yield

$$\frac{F_r(x_r)}{x_r} = F_r'(x_r).$$

This implies that x_r, and consequently $F_r'(x_r)$, are determined independently of the output of the industry as a whole; and this implies in turn that the supply price of the industry is the same whatever the magnitude of its output. In other words, the industry is necessarily conducted in accordance with the law of constant supply price.

§ 12. In this simple case, since the cost function of the equilibrium firm is a function of one variable, it can be—as of

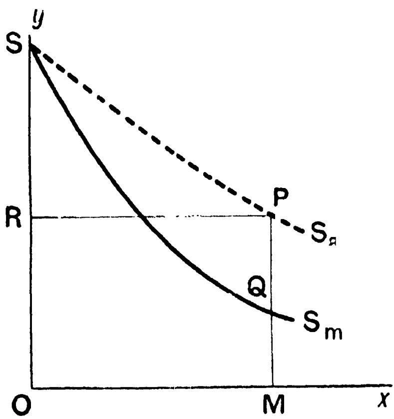


Fig. 1.

course it cannot be when two variables are involved—represented by a plane diagram. It may be of service to persons who prefer diagrams to algebra to set out the implications of the foregoing analysis by these means. In the annexed figures the curve SS_m

represents the marginal costs that various amounts of output involve to the equilibrium firm, and the curve SS_a the average costs. These two curves are, of course, bound together by a rigid relation; such that, if M be any point on Ox and a per-

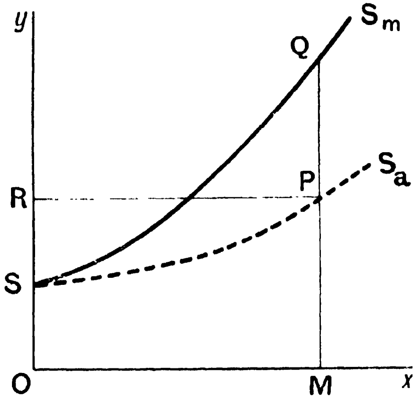


FIG. 2.

pendicular be drawn through M cutting SS_m in Q and SS_a in P, the area $SQMO$ is equal to the rectangle $RPMO$, whatever be the shapes of the two curves. It is easy to see that, if either curve slopes downward throughout (as in Fig. 1), the other

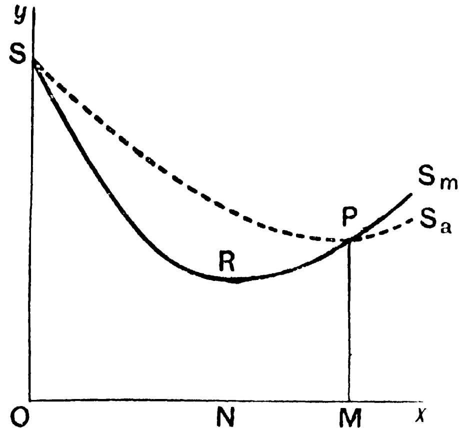


FIG. 3.

must also do this; and, if either slopes upward throughout (as in Fig. 2), so also must the other. If SS_m slopes downward at first, then turns upward and thereafter continues to rise, the curve SS_a will continue to slope downward until the point at

which the now upward moving SS_m intersects it, and will then itself turn upward. This case is represented by Fig. 3. If SS_m slopes upward at first, then turns downward and thereafter continues to fall, SS_a will, in like manner, slope upward

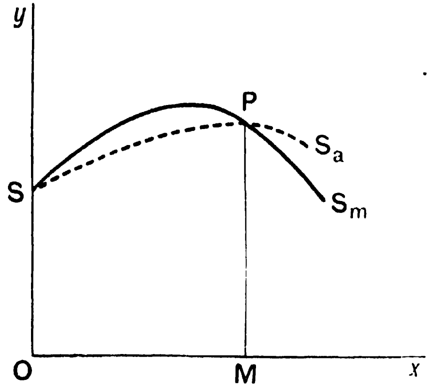


FIG. 4.

until SS_m intersects it and will then itself turn downward. This case is represented in Fig. 4. Finally, if, either initially or after a point of intersection between the two curves, either of them henceforward moves horizontally, the other must coincide with

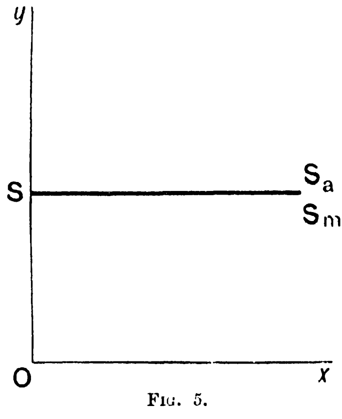


FIG. 5.

it and do the same. This case is represented in Figs. 5, 6 and 7.[1] The conditions of equilibrium for the equilibrium firm set

[1] We could, of course, if we wished, draw more complicated figures in which the curves should reverse their direction of movement more than once, but no new principle would be brought to light by this proceeding.

out in the preceding section imply that it is producing such a quantity of output *OM* that an ordinate drawn perpendicular to *OM* cuts the curves SS_m and SS_a at the same point. Hence in the conditions represented in Figs. 1 and 2 no equilibrium of any

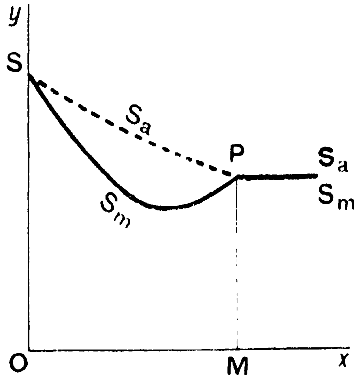


FIG. 6.

sort is possible. In those represented by Fig. 4 there is a single point of unstable equilibrium: in those represented by Figs. 5 to 7 there are ranges of neutral equilibria: and in those represented by Fig. 3 there is a single point of stable equilibrium; the

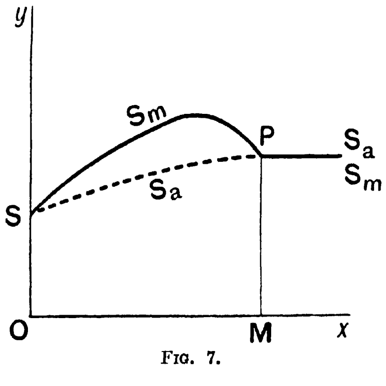


FIG. 7.

point, namely, at which internal economics have reached their limit in such wise that the average cost of production is at a minimum. Unstable equilibrium is, as we have seen, for practical purposes impossible. If neutral equilibrium prevails, changes in the output of the equilibrium firm may take place,

but cannot be caused by associated changes in the output of the industry as a whole. If stable equilibrium prevails, the output of the equilibrium firm cannot change. It is fixed rigidly, and changes in the output of the industry as a whole can only come about through an alteration either in the number of firms employed or in the magnitude of the non-equilibrium firms. In any event, whether neutral or stable equilibrium prevails, the average (and marginal) cost of the equilibrium firm, and so the supply price of the industry, is the same for all outputs of the industry: *i.e.* the industry conforms to conditions of constant supply price.

§ 13. In the second class of case distinguished in § 4 the formula for the costs incurred by the equilibrium firm degrades to $F_r(x_r) + \frac{x_r}{y}\psi(y)$.

The two conditions of equilibrium become

$$p = F_r'(x_r) + \frac{\psi(y)}{y} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (1)$$

$$p = \frac{F_r(x_r)}{x_r} + \frac{\psi(y)}{y} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (2)$$

and the condition that the equilibrium shall be neutral or stable becomes, as before,

$$F_r''(x_r) = > 0 \quad . \quad . \quad . \quad . \quad . \quad . \quad (3).$$

As in the previous case, conditions (1) and (2) yield $\frac{F_r(x_r)}{x_r} = F_r'(x_r)$.

So far, therefore, as the internal position and what we may term the internal costs of the equilibrium firm are concerned, everything is exactly the same as it was in that case. Internal costs per unit of product are determined at a fixed level independent of the output of the industry as a whole, and the size of the equilibrium firm is also independent of that output. In this case, however, these results do not imply that the industry as a whole must conform to the law of constant supply price. For, though $\frac{F_r(x_r)}{x_r}$ is fixed independently of y, the element $\frac{\psi(y)}{y}$, and, therefore,

$$\frac{F_r(x_r)}{x_r} + \frac{\psi(y)}{y}$$

are, so far as the present argument goes, free to vary up or down as y varies. Thus, if a growth in the output of the cotton industry led to a rise in the price of its material, raw cotton, the cotton industry as a whole would conform to the law of increasing supply price; if its expansion led to a fall in the price of raw cotton, to the law of decreasing supply price. To determine

whether in fact the price of materials, machinery and so on supplied to an industry by others will rise, fall or remain constant when the output of that industry increases, we should need to step outside the industry primarily under review and investigate the conditions of production in the others.

§ 14. In the third and most general case distinguished in § 4 it is obvious that the three governing conditions impose no restriction on the relations that may subsist between variations in the supply price and in output. It is still true that, for any given output of the industry as a whole, the output of the equilibrium firm must be such as to make its marginal costs and its average costs equal. But, as the output of the industry as a whole varies, both the output of the equilibrium firm which will make these two things equal and also their magnitude when they are equal may vary indefinitely in either direction. Even, therefore, if the prices of the materials and machinery bought from outside do not vary with variations in the scale of our industry, its own supply price may vary. Many-firm industries of the generalised type are thus perfectly free to conform to the law of increasing supply price, constant supply price, or decreasing supply price, or to any combination of these laws in respect of different quantities of output. Fig. 3 on p. 246 still correctly represents the conditions of supply in the equilibrium firm *when the aggregate demand is such that OM units are being purchased from that firm at a price PM per unit.* But now, when the aggregate demand alters, the curves SS_m and SS_a alter also. They move upwards or downwards, or they change their shape or they do both these things. After the change, as before, equilibrium is only obtained when the selling price is equal to both the average cost and the marginal cost of the equilibrium firm. The output of that firm is still measured by OM, where M is the base of a perpendicular drawn from the point of intersection of SS_m and SS_a; but, nevertheless, both the selling price and the output of the equilibrium firm may be different from what they were before the change.

III

§ 15. Consider an industry towards whose output several factors of production contribute: and for the present ignore the fact that the industry also purchases for its service materials and machinery made by factors of production employed outside itself. When an output y is being produced by the industry as a whole, let a, b. . . units of the several factors be at work in the

equilibrium firm at prices p_1, p_2. . . . The supply price of the output y is then

$$\frac{p_1a + p_2b + \ldots}{x_r}$$

and the rate at which the supply price increases as y increases

$$= \frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\} = \frac{d}{dy}\left\{\frac{1}{x_r}(p_1a + p_2b + \ldots)\right\}$$

$$= \frac{1}{x_r}\left\{a\frac{dp_1}{dy} + b\frac{dp_2}{dy} + \ldots\right\} + \left\{p_1\frac{d}{dy}\left(\frac{a}{x_r}\right) + p_2\frac{d}{dy}\left(\frac{b}{x_r}\right) + \ldots\right\}.$$

The elements $\left\{p_1\frac{d}{dy}\left(\frac{a}{x_r}\right) + p_2\frac{d}{dy}\left(\frac{b}{x_r}\right) + \ldots\right\}$ in this expression represent a net cost to the community as a whole: they measure the money value of the satisfaction which the increments of the several factors that are diverted to our industy would have yielded if they had not been so diverted. But the elements $\frac{1}{x_r}\left\{a\frac{dp_1}{dy} + b\frac{dp_2}{dy} + \ldots\right\}$ do not represent any net cost to the community as a whole. When they exist, they represent transfers of purchasing power from the people controlling the industry, and ultimately from the consumers of its output, to the owners of the several factors of production. If the prices of these factors are unaltered by changes in the output of our industry—which will happen if the industry does not employ more than a very small proportion of the total supply of any factor—they vanish; otherwise they may be either positive or negative. In any event they stand on a different footing from the other set of elements. It becomes important to distinguish industries, not only according as they follow the laws of increasing, constant or decreasing supply price as understood so far, but also according as they conform to one or another of these laws *when the rates of change in money supply price have been corrected so as to eliminate transfer elements.* An industry conforms to one or another of the above laws thus qualified according as

$$\frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\} - \frac{1}{x_r}\left\{a\frac{dp_1}{dy} + b\frac{dp_2}{dy} + \ldots\right\}$$

is positive, nil or negative; *i.e.*, according as

$$\left\{p_1\frac{d}{dy}\left(\frac{a}{x_r}\right) + p_2\frac{d}{dy}\left(\frac{b}{x_r}\right) + \ldots\right\} > = < 0.$$

§ 16. So far as formal considerations go there is not here any restriction on the range of what is possible. It is necessary, however, to look behind formal to material considerations. Clearly the

law of decreasing supply price, as conceived when correction has been made for transfer elements in rates of price change, is materially possible. For, when the scale of an industry increases, this change often leads to a change in the internal structure and methods of working of the firms engaged in it of a kind which lowers the average (which is also the marginal) cost of the output that maintains the equilibrium firm in equilibrium. Thus many writers have called attention to the fact that, when an industry is on a small scale, the firms belonging to it all engage in producing a number of different types or varieties of their commodity. They are, more or less, firms of all work. There is not a sufficiently wide or assured market to allow of close specialisation. As, however, the general demand grows, it becomes more and more worth while for firms to specialise on particular types. Thus Sir Sydney Chapman has observed that the relatively large scale of the cotton industry in England is associated, not only with specialisation between the processes of spinning and weaving, but with further specialisation between firms spinning fine counts and those spinning coarse counts. In contrast to this: "The range of work undertaken by the typical factory in Germany is far greater than that undertaken by the typical factory in England. Hence naturally the skill of the operatives is less in Germany; more time is wasted and factory organisation is less perfect."[1] The increased specialisation of its component firms made possible by an enlargement in an industry as a whole often involves a large reduction in costs. This reduction might, so far as pure theory goes, be accompanied by no change, or even by a decrease, in the size of the typical firms. In practice, it is likely to be accompanied by some increase in this size. Thus Marshall writes: "An increase in the aggregate volume of the production of anything will generally increase the size, and, therefore, the internal economies possessed by (such) a representative firm."[2] This, however, is a secondary consideration. The essential point is that an increase in the scale to which an industry is producing frequently alters—in general diminishes—the average (and marginal) costs of the equilibrium firm contained in it, whether or not it also alters its size. There is then no difficulty in seeing that the law of decreasing supply price, as conceived when correction has been made for transfer elements in rates of price change, is not merely formally possible, but is likely to be followed in practice by many manufacturing industries.

[1] *Work and Wages*, Vol. I. p. 166. [2] *Principles of Economics*, p. 318.

§ 17. The law of increasing supply price, as so conceived, is, however, in different case. When an industry increases its scale of output, various new arrangements as to distribution among firms of different sizes, proportion of factors employed and so on may be found to be economical, which would not have been economical in a small-scale industry. But, apart from changes in the prices of the several factors, no arrangements possible before are *excluded*. For example, there is nothing to prevent a 1 per cent. increase of output from being brought about by an equal proportionate increase in all the factors of production, and it is plainly impossible that a 1 per cent. increase in all the factors (including managerial capacity) can involve *less* than a 1 per cent. increase of output. Unless there is some other arrangement involving equal money cost but producing more output than this, this will, therefore, be adopted. In other words, it is impossible that

$$\left\{p_1\frac{d}{dy}\left(\frac{a}{x_r}\right)+p_2\frac{d}{dy}\left(\frac{b}{x_r}\right)+\ldots\right\}>0.$$

This implies that in actual life an industry, whose purchases embrace only factors of production, cannot conform to the law of increasing supply price as conceived when correction has been made for transfer elements in rates of price change.

§ 18. When an industry, besides purchasing ultimate factors of production, purchases also materials, machinery and so on, the matter is less simple. The expression that represents rates of change in the money supply price now contains further elements of the form $q\frac{dp}{dy}$; and these elements, if such exist, do not now necessarily represent only transfer expenditure. They do not do so, for example, when an increase in the size of the cotton industry enables textile machinery to be produced for that industry with more help from specialisation and standardisation in the industries that supply it. Since, however, what is sold to one industry, other than factors of production, must be the product of another industry, it follows from the discussion of the preceding section that an increase in the output (and, therefore, in the demand for materials and machinery) of our industry cannot involve an increase, as conceived when correction has been made for transfer elements in rates of price change, in the supply price of the things it buys. Therefore, in this complex case no less than in the simpler one, the law of increasing supply price, so conceived, is excluded. From a cosmopolitan point of view it is excluded absolutely. From the point of view of a particular

country purchasing materials from abroad it may, however, be present. For, though, if the price of the materials rises as a consequence of an increase in the scale of our industry, this can only be because a transfer is made to the owners of the factors that help to make them, these owners belong to other countries, and, therefore, so far as our country is concerned, the transfer does not cancel out.

IV

§ 19. Let us now revert to laws of supply price conceived *simpliciter*, and consider them in relation to an industry composed of one firm only. Here the equilibrium firm and the industry as a whole become identical, so that there is no need to employ a function of two variables. Moreover, marginal cost is no longer ambiguous: it must signify marginal additive cost, since there is no such thing as marginal substitute cost. If we were to follow blindly the lead of the preceding discussion, we should conclude that equilibrium requires that $p = \frac{F(y)}{y} = F'(y)$. This would mean that there can only be a supply price in respect of one or, if the curves of marginal cost and of average cost cross one another several times, in respect of a few isolated quantities of output, unless the industry conforms to conditions of constant supply price. Only then, it would seem, is the existence of a continuous supply schedule of the ordinary type possible. It is not difficult to see, however, that the foundation of this argument is unsound. For the equilibrium firm of a many-firm industry it is true that equilibrium is only attainable if both its average cost and its marginal cost are equal to the supply price of the industry. But for the equilibrium firm of a one-firm industry that is not true. There can, indeed, be no equilibrium if the average cost is greater than the supply price and the industry is selling at the supply price; for, in such conditions, there will be a tendency to contraction. Likewise there can be no equilibrium if the marginal cost is greater than the supply price and the industry is selling at the supply price; for here, again, there will be a tendency to contraction. But, since we have to do with one firm only, equilibrium does not forbid average cost to be *less* than the supply price. Again, if, where average cost is equal to the supply price, marginal cost is less than this, and the industry is selling at the supply price, there is no tendency for output to expand, since any expansion would necessarily involve a loss, and, therefore, equilibrium is not

incompatible with this arrangement.[1] Hence we conclude that in a one-firm industry the supply price of any given quantity of output is equal to average cost or marginal cost, according as the one or the other of these is the greater. So far as formal considerations go, the industry is free to conform to decreasing, constant or increasing (money) supply price. If it conforms to decreasing supply price throughout, the supply curve is coincident with the curve of average cost: if it conforms to increasing

[1] This matter is best elucidated by means of a diagram. Let DD' be the demand curve: SS_m the curve of marginal costs, and SS_a the curve of average costs in the sense explained in § 12. Let OM units be produced and sold at a price PM, where P is the point of intersection between DD' and SS_a. If the

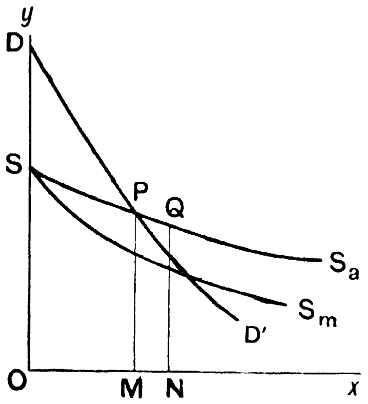


Fig. 8.

industry were to increase its output beyond OM, say to ON, the extra units would cost less than PM per unit to produce. But, nevertheless, on the assumption that all units are sold at the same price, ON units could not be sold at a less price than QN without involving the industry in a loss. Since, however, the portion of DD' that is to the right of P necessarily lies below SS_a, it is impossible for an output ON to be sold at a price as high as QN. Hence, if the industry expands its output beyond OM, it will make a loss; and, therefore, it has no tendency to expand. When the curves SS_m and SS_a represent the circumstances of one equilibrium firm among many firms, the position is quite different. It is not now proper to draw a demand curve of the form of DD'. The price in the market would be absolutely unaltered by an expansion on the part of the equilibrium firm if its expansion were balanced by the corresponding contraction in other firms, and approximately unaltered—the equilibrium firm being supposed small relatively to the industry as a whole—if the output of other firms remained unchanged. Therefore the equilibrium firm could expand to ON and still sell at approximately the old price PM. Thus it could sell an enlarged output at more than the average cost of that output, and so make a gain. Hence, for one firm among many others, a state of things in which the supply price of the industry is equal to the average cost of the equilibrium firm, but greater than its marginal cost, is not a state of equilibrium.

supply price throughout, with the curve of marginal cost: if it conforms to constant supply price throughout, with both these curves. If it conforms to conditions of increasing supply price in respect of some outputs, and to decreasing supply price in respect of other outputs, the supply curve lies along the curve of average cost when this is higher than the curve of marginal cost, and along the curve of marginal cost when that is the higher of the two.

§ 20. What has been said above delimits the range of what is possible for variations in supply price conceived *simpliciter*. As was shown, however, in §§ 17–18, when correction has been made for transfer elements in rates of price change, supply price cannot, apart from the special case of imported materials, increase with increases of output. Hence in a one-firm industry, as in a many-firm industry, only the laws of constant or decreasing supply price, as so conceived, are admissible otherwise than in this special case.

V

§ 21. We have now to introduce a new concept, the marginal upply price, as distinguished from the supply price of an output y to an industry as a whole. Let us first suppose that no element of transfer expense needs to be allowed for. Then the marginal cost to the industry as a whole, *i.e.* the marginal supply price of an output y, $= \frac{d}{dy}\left\{\frac{y}{x_r} \cdot F(x_r,y)\right\}$. The marginal supply price then, except in one-firm industries in which marginal cost exceeds average cost, exceeds the supply price by

$$\frac{d}{dy}\left\{y\frac{F_r(x_r,y)}{x_r}\right\} - \frac{F_r(x_r,y)}{x_r} = y\frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\}.$$

Now the industry conforms to the law of increasing, constant or decreasing supply price according as $\frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\}$ is positive, nil or negative. It follows that the marginal supply price exceeds, equals or falls short of the supply price according as the industry conforms to the law of increasing, constant or decreasing supply price.

§ 22. When an element of transfer expense is present, the marginal supply price, corrected to allow for this, of an output y to the industry is

$$\frac{d}{dy}\left\{y\frac{F_r(x_r,y)}{x_r}\right\} - \frac{y}{x_r}\left\{a\frac{dp_1}{dy} + b\frac{dp_2}{dy} \ldots\right\}$$

and, with the same exception as before, the marginal supply price, thus corrected, of an output y exceeds the supply price by

$$y\frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\} - \frac{y}{x_r}\left\{a\frac{dp}{dy} + b\frac{dp_2}{dy} + \ldots\right\}$$

But, as was shown in § 15, the industry conforms to the law of increasing, constant or decreasing supply price, as conceived when correction has been made for transfer elements in rates of price change, according as

$$\frac{d}{dy}\left\{\frac{F_r(x_r,y)}{x_r}\right\} - \frac{1}{x_r}\left\{a\frac{dp_1}{dy} + b\frac{dp_2}{dy} + \ldots\right\}$$

is positive, nil or negative. Therefore, equally whether transfer elements are or are not present, the marginal supply price of an output y of an industry, corrected for these elements, is greater than, equal to or less than the supply price, according as the industry conforms to the law of increasing, constant or decreasing supply price as conceived when correction has been made for transfer elements in rates of price change.

§ 23. Subject to the condition that the marginal utility of money is equal to all parties involved, it is evident that maximum satisfaction is attained when the output is such as to make the demand price equal to the marginal supply price corrected, if correction is needed, to allow for transfer elements. Hence, alike in a many-firm and in a one-firm industry, an output which makes the demand price equal to the supply price will be too large, right or too small, according as the marginal supply price so corrected is less than, equal to or greater than the supply price; that is to say, apart from one-firm industries, in which marginal cost exceeds average cost, according as our industry conforms to the law of increasing, constant or decreasing supply price, as conceived when correction has been made for transfer elements in rates of price change. In one-firm industries of the excepted kind, if there are no transfer elements, an output which makes the demand price equal to the supply price will be right; if there are transfer elements, it will be too small.

A. C. Pigou

VARYING COSTS AND MARGINAL NET PRODUCTS

1. This note seeks to show that the doctrine set forth by Professor Pigou in the second edition of his *Economics of Welfare*, Part II. chap. x. needs qualification.

2. No attempt has been made to phrase it precisely. For the sake of brevity, certain inaccuracies and ambiguities of expression have been allowed to pass, since they do not materially affect the main argument. In particular, the notion of cost—"marginal" and "infra-marginal"—needs elucidation. But that task is left over for another occasion.

3. The doctrine in question may be summarised as follows:

An increase in the scale of an industry "obeying the law of diminishing returns" causes a higher price per unit to be charged for the whole output: hence it "throws a burden on purchasers which is not reflected in any loss to the investor" to whom it is due. From this it might appear that the return to the investor [the "private net product" of his investment] is greater than the addition he makes to the national dividend [its "social net product"] by the amount of the purchasers' loss. The appearance is, however, illusory; for the burden thrown on to consumers "is balanced by a corresponding and equivalent gain to . . . landlords": so that enlarged output "does not involve any *net* change in the fortunes of the community outside those who make the investment," but merely a transfer from purchasers to landlords.[1] Thus, where diminishing returns prevail, the marginal social net product of investment is equal to the marginal private net product.[2]

In the converse case of an industry "obeying the law of increasing returns," an expansion of production causes a lower price per unit to be charged for the whole output; and thus occasions a gain to the purchasers which is not reflected in any gain to the investor. But this gain is not balanced by a reduction in rents: it is, in fact, "offset by nothing." Hence "in industries of increasing returns, enlarged output involves a *net* change

[1] A. C. Pigou, *op. cit.*, p. 194.

[2] So also, it is argued, in the case of constant returns (*op. cit.*, p. 193). For here an expansion of output involves no change in price, and therefore neither throws a burden nor confers a gain on the purchasers.

[increase] in the fortunes of the community outside those who make the investment" to which it is due; and the private net product of that investment is accordingly less than its social net product by the amount of the purchasers' gain.[1] Conditions of simple competition are assumed in both cases.

4. Under conditions of simple competition the long-period supply price of any given output is equal to its marginal cost of production (as measured in money). Following the procedure and terminology adopted by Alfred Marshall in constructing his "particular expenses curve," [2] we may identify this marginal cost with the cost of a unit whose "producer has no differential advantages for production." This is the same thing as saying the cost—to its producer—of a unit produced under the least favourable circumstances prevailing when the output is of the given magnitude.[3] In equilibrium the whole output sells at this price. But there may be (usually are) some units whose producers have differential advantages and whose cost (excluding rent) is therefore less than this: each of these units contributes to rent a sum equal to the difference between its own cost (excluding rent) and marginal cost. In the aggregate, rent is equal to the sum of these differences.[4]

5. Clearly, then, the effect which a change in the scale of production has upon rent depends not only upon its effect on marginal cost and price, but also upon its effect on the cost

[1] *Loc. cit.*, pp. 193-4.

[2] *Principles of Economics* (7th ed.), Appendix H, pp. 810-11.

[3] Here and elsewhere, "cost" should be taken to mean the [mathematically] "expected"—not the actual—cost. The actual cost of any particular unit will be greater or less than its "expected" cost according as its producer's experience is worse or better than the expectation. Thus each unit's contribution to rent, as defined in the text, is its "expected," not its actual, contribution. But, in equilibrium, the sum of the excesses above expected costs must be equal to the sum of the deficiencies below them—otherwise the expectation of profit in the industry would be above or below normal. Hence the aggregate of actual rents is equal to the aggregate of "expected" rents—which latter is the "aggregate rent" of the text. Similarly, marginal cost is the "expected" cost where the expectation is least favourable. Some units may actually cost more than this, but if they do they will be sold at a loss, *i.e.* their producers will get less than normal profits.

[4] This implies that the marginal unit of output contributes nothing to rent. To reconcile this position with the modern view that the payment for land "on the margin of transference" (see H. D. Henderson, *Supply and Demand*, chap. vi. pp. 101–2) should be counted as a cost, it is merely necessary to treat as "*cost*" such part of the payment for each piece of land attached to the industry as is required to prevent its being transferred to another use, and only the excess over this as "*rent*." Land on the margin of transference does not then yield any "rent," but land specially suitable for the particular industry under consideration *does*. Of course, other factors besides land may yield "rent" as defined in the text.

(excluding rent) of those units whose producers enjoy "differential advantages"—or, as we may conveniently say, its effect on "infra-marginal costs." That it is liable to have such an effect a moment's reflection will show. For many of the external economies of large-scale production (*e.g.* increased facilities for transport and communication) will often be shared by *all* producers and affect *every* unit of output.[1] Nor is it difficult to see that the effect on infra-marginal costs (per unit) may differ in magnitude and even in direction from the effect on marginal cost; for different parts of the output may be differently affected. An economy in haulage costs, for example, may reduce cost of production per unit more on sites which are remote from a market than on those which are near to it; and if the enlarged output, while lowering haulage cost, raises the cost of handling at the point of destination (*e.g.* by congesting a port at which the goods are loaded for export), the net effect on cost may be upward for sites near that point and downward for those further off.[2]

It is considerations of this kind that seem to necessitate some qualification of the doctrine summarised in § 3.

6. We have to consider an increase of output from x to $(x+1)$ units.

Let supply price for the output $x = p_1$ = marginal cost of production = cost of producing a unit without "differential advantages" when the total output is x. And let supply price for the output $(x+1) = p_2$ = marginal cost = cost of producing a unit without "differential advantages" when the total output is $(x+1)$. Then, in equilibrium, the total selling values of the outputs x and $(x+1)$ are p_1x and $p_2(x+1)$ respectively. And the "burden thrown on to purchasers" by the enlargement of output is $(p_2 - p_1)x$. This is positive (indicating a loss) if $p_2 > p_1$, *i.e.* in the case of diminishing (marginal) returns: negative (indicating a gain) if $p_2 < p_1$, *i.e.* in the case of increasing (marginal) returns; and has the value 0 (indicating neither loss nor gain) if $p_2 = p_1$, *i.e.* in the case of constant (marginal) returns.

Let the total cost of production *excluding rent* be c_1 when the output is x, c_2 when it is $(x+1)$. Then rent is $p_1x - c_1$ when

[1] The case (noted by Professor Pigou, *op. cit.*, p. 195) of an industry importing a raw material whose price rises as demand increases affords—if we confine our attention to the importing country—an illustration of an external *dis*economy of large-scale production, a lessening of facilities, which affects every unit of output equally.

[2] Of course, if marginal cost falls as output grows, infra-marginal costs per unit cannot go on rising indefinitely; for they would eventually become equal to marginal cost—and they cannot be higher. But they may go on rising over a wide range of outputs even though marginal cost continues to fall.

the output is x, and $p_2(x + 1) - c_2$ when it is $(x + 1)$. Hence the "landlord's gain" from the expansion of output is $[p_2(x + 1) - c_2] - [p_1x - c_1]$, *i.e.* $(p_2 - p_1)x - [(c_2 - p_2) - c_1]$.

But we have already seen that the expression $(p_2 - p_1)x$ represents the "burden thrown on to consumers." Thus "landlord's gain" is equal to the burden thrown on to consumers when the expression $(c_2 - p_2) - c_1 = 0$: less when it is positive: greater when it is negative. And this holds good whether $p_2 >$ or $<$ or $= p_1$: *i.e.* whether (marginal) returns are diminishing, increasing or constant.

Hence it is clear that the question whether the loss (or gain) "thrown on to the purchaser" by an enlargement of output is or is not "balanced by a corresponding and equivalent gain" (or loss) to the "landlord" does *not* depend on whether the commodity is produced under conditions of diminishing, increasing or constant returns.

Further analysis will indicate what it *does* depend on.

7. The conditions under which the "burden thrown on to purchasers" is equal to the "landlord's gain" is $c_2 - p_2 - c_1 = 0$, that is to say, $c_2 - p_2 = c_1$. But, by definition, p_2 is the cost of a unit produced under the least favourable circumstances when the output is $(x + 1)$ and contains no rent; while c_2 is the total cost, other than rent, of that output. Hence $c_2 - p_2$ is the total cost, other than rent, of the x units produced in the most favourable circumstances (*i.e.* with the greatest differential advantages) [1] when output is $(x + 1)$. And c_1 is the total cost, other than rent, of the output x. Our equation therefore means that the cost, excluding rent, of the x units which are produced in the most favourable circumstances when the output is $(x + 1)$ is the same as the cost, excluding rent, of the output x: in other words that, except as regards one unit (that, namely, which is produced in the least favourable circumstances), the facilities for producing the larger output are, on balance, neither more nor less than those available for the smaller output; or, in other words again, that, except as regards the least favourably conditioned unit of the larger output, there are, for the industry as a whole, neither economies nor diseconomies of large-scale production (or, alternatively, that these economies and diseconomies exactly balance).

[1] Of course, many—indeed all—of the units making up the output may be produced in conditions affording no more facilities than the least favourable circumstances—only a few, or none, may enjoy "differential advantages." The wording of the text means merely that the x units referred to must include all those, if there are any, whose producers have such advantages.

On this assumption, Professor Pigou's statement that, under conditions of diminishing [marginal] returns, the burden thrown on to consumers " is balanced by a corresponding and equivalent gain to landlords " is perfectly true. But then, *if the same assumption is made*, it is equally true of increasing returns.

It may be observed in passing that this assumption is not likely to be often fulfilled in practice. For, as we have already seen, a change in the scale of production is always liable to affect the facilities for producing a substantial part, if not the whole, of the output. Referring to agriculture, Marshall observed many years ago that " we are not properly at liberty to assume that the expenses of raising the produce from the richer lands and under the more favourable circumstances are independent of the extent to which production is carried; since an increased production is likely to lead to an improved organisation, if not of the farming industries themselves, yet of those subsidiary to them, and especially of the carrying trade."[1] The same reasoning applies to other industries. And the odds are against economies of this kind being exactly offset by analogous diseconomies.

8. Consider next the circumstances in which the " landlord's gain " is greater or less than the " burden thrown on to consumers." We get the one or the other of these results according as $(c_2 - p_2) - c_1 \lessgtr 0$: that is to say, according as $c_2 - p_2 \lessgtr c_1$.

Translating symbols into words, this means that " landlord's gain " exceeds or falls short of " purchasers' loss " according as the cost, excluding rent, of the x units produced in the most favourable circumstances when the output is $(x + 1)$ is less or greater than the cost, excluding rent, of the output x. Now the first of these costs is less than the second if the facilities for producing the larger output, exclusive of the unit produced in the least favourable circumstances, are greater than those available for the smaller output: greater, if they are smaller. Hence an enlargement of output causes a net increase " in the fortunes of the community as a whole outside those who make the investment to which it is due " if, apart from their effect in the least favourably circumstanced unit of the larger output, the economies of large-scale production outweigh its diseconomies: a net decrease in the converse case.

The question whether an enlargement of output causes " a net change in the fortunes of the community outside those who make the investment " to which it is due and, if so, whether this "net change " is a gain or loss, is thus seen to depend not on its

[1] *Op. cit.*, p. 473 n.

effect upon the cost of the marginal unit but on its effect on the cost of the rest of the output.

9. Something more should perhaps be said about the special case in which the change in the purchasers' fortunes is "offset by nothing"—in which, that is, landlord's gain is zero. The condition for this is $(p_2 - p_1)x - [(c_2 - p_2) - c_1] = 0$: that is to say,

$$(p_2 - p_1)x = (c_2 - p_2) - c_1, \text{ or } p_2 - p_1 = (c_2 - p_2)/x - c_1/x.$$

Now $p_2 - p_1$ is the change in the marginal cost of production: while the expression $(c_2 - p_2)/x - c_1/x$ is the amount by which the average cost per unit (excluding rent) of the x units produced in the most favourable circumstances when output is $(x + 1)$ exceeds the average cost per unit (again excluding rent) of the output x. Our equation, therefore, means that the enlargement of output sets up economies or diseconomies or both which, on balance, cause the average cost (excluding rent) of the whole output to change in the same direction and by the same amount as the cost of a unit produced in the least favourable circumstances.

On this assumption, Professor Pigou is right in claiming that "in industries of increasing [marginal] returns the gain to purchasers is offset by nothing." But, once more, *if the same assumption is made*, the claim is equally valid as regards the purchasers' loss in industries "of diminishing returns." [1]

This assumption is perhaps more likely to be fulfilled than that discussed in § 7. But not *very* likely. For, when an industry expands, some of the new resources which it employs (say, some of the new sites taken in) will often be less suitable than any of its old resources (say, sites already occupied). The units of output produced with their aid (say, on the new sites) are therefore subject to a diseconomy—a worsening of facilities—which is not shared by the rest of the output. Hence, unless this peculiar disadvantage is offset by economies (or an absence of diseconomies) which are likewise not shared by the rest of the output, cost under the least advantageous circumstances will increase more or diminish less than the average cost throughout the industry. The conditions under which our present assumption

[1] Professor Pigou's hypothetical case of an industry dependent on imported raw materials which rise in price as output grows is, in fact, an example—if we confine attention to the importing country and suppose no other change in the facilities for production—of a diminishing return industry in which average cost moves in the same direction and by the same amount as marginal cost. And the "real parallelism" which he finds in these circumstances between "diminishing return industries" and "increasing return industries" is due to the fact that he is here making the same assumption about both.

is fulfilled are therefore of a somewhat special character. (Of course, in cases where an expansion of output does *not* necessitate recourse to less suitable resources, the condition required for the fulfilment of our assumption is merely that the net economies—or diseconomies—consequent on expansion should, on the average, be the same for production with the old as for production with the new resources—which is, perhaps, less unlikely.)

10. Objection may be raised at this point on the ground that Professor Pigou defines increasing returns as conditions under which, not the *marginal*, but the *average* cost of production is lowered by an enlargement of output; and conversely of diminishing returns. It would seem, however, from the context that he includes " rent " as a part of cost. If this is done, average cost is, of course, the same as marginal cost, and the objection therefore fails.

Moreover, even if his definitions be taken to refer to average cost *excluding* rent (though this seems inconsistent with the context), it can easily be shown that reasoning similar to that advanced in the preceding sections of this note still applies.

A third sense in which " returns " may be used emerges from the foregoing analysis. The conditions under which " landlord's gain " exceeds, is equal to, or falls short of " purchasers' loss," hitherto written as $c_2 - p_2 \lesseqgtr c_1$, may be written $c_2 - c_1 \lesseqgtr p_2$. But $c_2 - c_1$ is the increase in aggregate cost, other than rent, accompanying an increase of output from x to $(x + 1)$,—or, as we may conveniently call it, the "*final trade cost*" of the product.[1] Now this final trade cost may fall, remain constant, or rise as output increases. And it is clear from what has been said above (more especially in § 5) that it need not move by the same amount nor in the same direction as marginal cost. There is, therefore, a distinction between what we may call increasing, constant and diminishing final trade return (diminishing constant and increasing final trade cost) and increasing constant and diminishing marginal return.

The distinction is important for some purposes. But it can be shown that the doctrine here under review cannot be rehabilitated by interpreting " returns " in this third sense.

[1] It will be seen that the difference between " landlords' gain " and " purchasers' loss " is equal to the difference between " marginal " and " final trade " cost. For " landlords' gain " being $(p_2 - p_1)x - [(c_2 - p_2) - c_1]$ and purchasers' loss $(p_2 - p_1)x$, the excess of the former over the latter is $-[(c_2 - p_2) - c_1]$, *i.e.* $p_2 - (c_2 - c_1)$. So far as the matters here relevant are concerned, this also measures the excess of " marginal social " over " marginal private net product."

11. What then becomes of the doctrine that it is in the social interest to give a bounty to industries showing increasing returns and to tax those showing diminishing returns?

Stated in this unqualified form it collapses. Nor can it be defended without further qualification in the form in which it is now advanced by Professor Pigou, viz. that there is "a presumption in favour of State bounties to industries in which the law of increasing returns operates strongly, and of State taxes upon industries in which the law of diminishing returns operates strongly, and in which conditions are such that effects upon rents may be ignored." [1] The effects on rents must be allowed for in both types of industry, not in one only.

But in the form in which it was first enunciated by Marshall the doctrine remains unshaken.

For the claim advanced in his famous criticism of the doctrine of maximum satisfaction [2] is, in effect, as follows. An appropriate tax on industries showing diminishing returns, accompanied by a corresponding bounty to those showing increasing returns, would increase the aggregate satisfaction *of consumers*. But the inference that such a policy would, on balance, increase the economic welfare of the community *as a whole* is invalid, not only because of certain "semi-ethical" considerations, but also because of "others of a strictly economic nature relating to the effects which any particular tax or bounty may exert on the interests of landlords, urban or agricultural, who own land adapted for the use in question": [3] and the note already quoted (§ 7), together with the appendix to which it refers,[4] shows that he had in mind considerations of the kind advanced above.

Nevertheless, the misconceptions to which the doctrine, even when thus carefully qualified, has given rise suggest that it might with advantage be restated in terms of the divergence between "marginal cost" and "final trade cost." This will be attempted in detail on another occasion. But the general line of the argument, so far as it relates to competitive conditions, may be roughly indicated here.

In most industries the addition to aggregate costs (other than rent) occasioned by a unit-expansion of output [here called "final trade cost"] is *less* than the cost, to its producer, of the least favourably conditioned unit of the larger output ["marginal cost"]; for, as a rule, the external economies of large-scale production (improvements in organisation, transport, com-

[1] *Op. cit.*, p. 197.
[2] *Op. cit.*, pp. 472–5.
[3] *Op. cit.*, p. 473.
[4] *Op. cit.*, Appendix H (especially § 4).

munication, etc.) are, for the industry as a whole, greater than external diseconomies (increased difficulties of transport, marketing, etc.), so that the production of the additional unit will, on balance, improve the facilities for the rest of the output. But the size of this deficiency will be greater, in relation to final trade cost, in some industries (where *net* external economies are large) than in others (where they are small): in some cases, indeed, it may happen that the deficiency does not exist (absence of net external economies or diseconomies), or that it is negative (net external *dis*economies). In other words, the ratio of marginal to final trade cost varies from industry to industry and, though it is usually greater than one, in some cases it may be less.

Now, if competition is perfect, resources will tend to be distributed between different industries so as to make marginal cost equal to the value of a unit of product in each industry.[1] But, since the ratio of marginal to final trade cost is different in different industries, this means that the ratio of final trade cost to the value of a unit of product varies from one industry to another.[2] And the national dividend would, obviously, be increased by transferring resources from industries where this latter ratio is small (where net external economies are small or negative) to those where it is large (net external economies large).[3] There is, therefore, a *prima facie* case for checking investment in the first group of industries and stimulating it in the second.

It may be argued than an industry which shows increasing (marginal) returns is more likely to belong to the second group than to the first; but it is by no means certain to do so. Nor is there any certainty that an industry showing diminishing returns will belong to the first group.

G. F. SHOVE

[1] Which implies that the "marginal private net product" of resources is the same in all industries.

[2] Which implies that the "marginal social net product" of resources is different in different industries.

[3] Supposing the relation between "marginal social net product" and "marginal private net product" to be in other respects the same in both cases; and neglecting costs of transference.

THE IRISH FREE STATE BUDGET

(1) It is a question of some immediate interest whether the Irish Free State has hitherto succeeded in covering its ordinary expenditure by its ordinary revenue, and what its prospects are of doing so in the future. The published accounts enable a definite answer to be given to the first part of the query with respect to the first five completed years of its independent financial existence, and that answer will form the basis for a reasoned forecast of the immediate future.

(2) In this brief inquiry two principles will be observed:

(i) Revenue lies where it falls, and expenditure is properly attributed to the year in which it comes in course of payment; consequently, where blocks of accumulated arrears have been either received or paid, no attempt will be made to redistribute them over the years in which they ought to have been received or paid, but if they are of significant amount their presence will be indicated.

(ii) Where the line of analysis followed would require the resolution of a total into two or more component parts, but the figures are lacking which would enable an exact segregation, no attempt will be made to substitute an arbitrary apportionment, but the presence of the undivided total and its probable bearing on the calculation in process will be indicated.

(3) At first sight it would not appear that the State has been successful in making ends meet. Revenue (excluding borrowings) and Expenditure have been:

Year.	Revenue.	Expenditure.	Deficit.
	£	£	£
1922-23	28,294,600	30,785,600	2,491,000
1923-24	31,174,800	41,974,200	10,799,400
1924-25	26,955,100	29,980,500	3,025,400
1925-26	25,554,100	28,129,500	2,575,400
1926-27	25,274,700	28,341,000 [1]	3,066,300

But in view of the principle, fully admitted in commercial and to a less degree in public financial practice, that not every expenditure is properly chargeable against income, the answer is still sufficiently uncertain to repay a more detailed investigation.

[1] Exchequer issues, probably slightly less than final audited expenditure.

(4) The starting-point for a division of expenditure into the parts which are respectively chargeable and not chargeable to income account must be the distinction drawn in the weekly returns and annual balance of the Exchequer Account between, on the one hand, issues for " Central Fund and Supply Services," and, on the other, " Other Issues "; or, as they are often called, issues " above " and " below the line " respectively. The distinction is founded not so much upon the economic nature of the expense (while the capital nature of the transaction recorded is a character of many of the entries " below the line," it is not universal, and equally characterises numerous expenses entered " above the line ") as upon its legal authorisation (issues " below the line " are made upon the authority, not of the annual Appropriation Act, but of some continuing statute). Three classes of items are included in the " Other Issues," viz.:

(i) Repayments of temporary borrowings.
(ii) Temporary advances.
(iii) Issues to meet capital expenditure.

The first of these we may leave out of consideration. The distinction between the second and third is fortuitous; the same item appears one year in Class (ii) and again in Class (iii), and all the items appearing in Class (iii) are advances which have to be repaid to the Exchequer. Consequently, Classes (ii) and (iii) will not here be distinguished. The issues comprised in these two classes have been:

(i) To the Unemployment Insurance Fund, under the Unemployment Insurance Acts, 1921.

(ii) To the Shannon Fund, under the Shannon Electricity Act, 1925.

(iii) To the Vote for the Post Office, under the Telegraph Acts, 1892–1921, and the Telephone Capital Act, 1924.

(iv) For the purchase of shares under the Industrial Trust Company of Ireland, Ltd. (Acquisition of Capital), Act, 1925. (The inclusion of this last, being a single and not a continuing payment, was contrary to the usual practice.)

The totals for the five years have been:

1922–23	£601,200
1923–24	411,000
1924–25	436,000
1925–26	911,200
1926–27	1,051,900

(5) On the income side of the account, " Other Receipts " comprise:

(i) Money raised by the creation of debt; with this we are not here concerned.

(ii) Repayment of Temporary Advances; these have all come from the Unemployment Insurance Fund and have amounted to:

1924–25	£20,000
1925–26	50,000
1926–27	115,000

(6) Similar to the issues listed in para. (4) in nature of application, but charged to "Supply Services" because authorised in each case by the annual Appropriation Act, have been advances:

(i) To the Local Loans Fund.
(ii) To the National Land Bank.
(iii) To Agricultural Credit Societies.
(iv) For the purchase of creameries.
(v) Several smaller miscellaneous advances.

The total amounts have been:

1922–23	£67,900
1923–24	25,000
1924–25	407,000
1925–26	86,100
1926–27	1,042,600

(7) On the other hand, several Departmental Funds—the Intermediate Education, the Endowment, and the Development Funds, and the remaining funds of the revolutionary Dail—have been wound up and their liabilities transferred to Votes; the proceeds, carried on the accounts as "Miscellaneous Revenue," represent the destruction of capital assets, and should not be balanced against current expenditure. Also, previous to April, 1926, the annuities collected through the Land Commission and the Board of Works on account of interest and sinking fund on advances from the Local Loans Fund of the United Kingdom were transferred *en bloc* to that Fund, but after that date this arrangement was replaced by an agreement whereby the Irish Free State pays an annuity of £600,000 for twenty years, retaining the amounts collected. For a few years the annual collections will exceed £600,000; the excess is plainly a realisation of assets and requires to be treated accordingly. The proceeds of all destruction of capital assets were:

1925–26	£43,300
1926–27	906,000

(8) The classes of expenditure listed in para. (4) and (6) above, whether accounted for as "Supply Services" or "Issues

below the line," all represent genuine capital investment, and the justification for their exclusion from the income account is the presumed reproductiveness of the investment. But there are also other cases of expenditure whose exclusion is justified by their "extraordinary" nature. It is unfortunate that the terms "abnormal," "non-recurrent" and "extraordinary" have been used rather indiscriminately to describe these cases, for there are numerous expenses which are "abnormal," "non-recurrent" or "extraordinary" in the *strict* sense of the word—*i.e.* provision is not made for them as a matter of course each year—and yet the probability of the reappearance of the same or similar circumstances is so high that it would be extremely imprudent not to require that the ordinary revenue should be capable of meeting such contingencies. This includes the case of liabilities negligently incurred, and—on the revenue side—windfalls; here the only rule to apply is that revenue and expenditure lie where they fall. Examples are: Relief grants, the guarantee by the Provisional Government of an advance from the National Land Bank to the Wolfhill Colliery, and the loss on the purchase and sale of coal in November 1926.

(9) But there are also admittedly cases where the concentrated incidence upon a short period of a mass of expenditure—which the revenue of the period could not be stretched to meet, and arising from a circumstance which, if it recur at all, is likely to do so only after a comparatively long interval—justifies the distribution of that expenditure by means of borrowing over a longer period. The Irish famine of 1847 and the earthquake at Tokyo in September 1923 are cases in point; the most frequent examples in European experience have been afforded by wars; the analogue for the Irish Free State is the expense incurred as a direct and immediate consequence of the revolution and civil war, 1916-1924. The principal heads of expenditure have been:

Year.	Compensation.		Restoration of Public Buildings.	Excess Cost of the Army.
	Property Losses.	Personal Injuries.		
	£	£	£	£
1922–23	1,095,300	11,700	347,500	5,709,000
1923–24	4,031,600	400,300	163,000	8,741,100
1924–25	2,267,400	312,900	190,300	1,350,800
1925–26	1,690,800	17,500	257,200	1,138,300
1926–27	1,706,000 [1]	4,300 [1]	250,000 [2]	602,000 [1]

[1] Exchequer issues. [2] Estimate.

There should be included also the sum of £199,800, the amount of the Local Taxation Adjustment Grant paid in 1922–23 in lieu of grants ordinarily issuing from the Exchequer to local authorities, and withheld by the British Government from those authorities which refused to perform the duties required of them by that Government. The " Personal Injury Compensation " payments contain some small proportion of annuity payments, and the " Restoration of Public Buildings " includes large sums of compensation paid to owners of buildings commandeered by the army. The most difficult point is raised by the " Excess Cost of the Army." While it is plain that some portion of the excessively heavy cost of the army in the earlier years must be regarded as sufficiently " abnormal " to come within the terms set out at the beginning of the paragraph, the selection of the particular figure cannot fail to be to a large extent arbitrary, and to reflect the current expectations of possible reductions in the " normal " cost for the future. In his 1926 Budget speech Mr. Blythe took the figure of £2,000,000 as " normal," but next year he felt entitled to reduce it to £1,500,000; while such variation is natural and inevitable in speeches separated by the space of a year, it vitiates any comparison between a series of years, for each of which some constant " normal " must be used. It appears that the actual expenditure for the years 1927–28 and 1928–29 will approximate to £1,750,000, and in the absence of any apparent ground for presuming a marked decrease in the future, that figure may be tentatively accepted as the " ordinary " expenditure.

(10) The expenses included in para. (9) are all the *direct* consequence of the revolution and civil war; pensions, whether arising from the disturbances or the change of government have not been included. There is no doubt that the charge on this account is and for some time will be heavier than it would be if retirements had taken place only in due course, that the excess is due to the change of government, and that that event was sufficiently unusual to come within the terms of para. (9). But the probable duration of a very considerable proportion of them is as great as the maturation period of a loan, so that no reduction of present expenditure would be accomplished by borrowing to meet them; this reasoning, of course, does not apply to gratuities and commuted pensions, but the amount of these lump payments is comparatively small and cannot be segregated from the total.

(11) On the other side of the account, any income arising on foot of any of the services to which these " abnormal " expenses relate must equally be set aside as properly applicable only to

meeting "abnormal" expenses, and not used to cover the current costs of government while the former are met by borrowing. The only items of importance have been the payments by the British Government on account of its liability for pre-Truce damage and injury, viz.:

1923–24	£2,171,600
1924–25	751,400
1925–26	995,400
1926–27	361,500

Under Art. 3 of the Agreement of December 3, 1925, the Government of the Irish Free State undertook to repay these sums to the British Government by an annuity of £250,000 for sixty years, commencing April 1, 1926.

(12) One final correction remains to be made; in the year 1922–23, before the two administrations were fully severed, revenue to the amount of £2,874,700 was collected in the area of the Irish Free State which was really attributable to Great Britain; this sum was paid over—£1,250,000 in 1922–23; £1,400,000 in 1923–24; and £224,700 in 1924–25; with some readjustment not of large amount in 1926–27.

(13) It is now possible to summarise the corrections:

RECEIPTS

Year.	Total Receipts.	Revenue Adjustment.	Destruction of Assets.	Extraordinary Receipts.
	£	£	£	£
1922–23	28,294,600	2,874,700	—	—
1923–24	31,174,800	—	—	2,171,600
1924–25	26,955,100	—	20,000	751,400
1925–26	25,554,100	—	93,300	995,400
1926–27	25,274,700	—	1,021,000	361,500

EXPENDITURE

Year.	Total Expenditure.	Revenue Adjustment.	Capital Investment.	Extraordinary Services.
	£	£	£	£
1922–23	30,785,600	1,250,000	669,100	7,363,300
1923–24	41,974,200	1,400,000	436,000	13,336,000
1924–25	29,980,500	224,700	843,000	4,121,400
1925–26	28,129,500	—	997,300	3,103,800
1926–27 [1]	28,341,000	—	2,094,500	2,562,300 [2]

[1] Exchequer Issues. [2] Including one estimated figure.

COMPARISON OF RECEIPTS AND EXPENDITURE

Year.	Ordinary.		Extraordinary.	
	Receipts.	Expenditure.	Receipts.	Expenditure.
	£	£	£	£
1922–23	25,419,900	21,503,200	—	8,032,400
1923–24	29,003,200	26,802,200	2,171,600	13,772,000
1924–25	26,183,700	24,791,400	771,400	4,964,400
1925–26	24,465,400	24,028,400	1,088,700	4,101,100
1926–27	23,892,200	23,684,200	1,382,500	4,656,800

The wide difference between 1922–23 and 1923–24 is explained partly by the assiduous collection of arrears, partly by the establishment of a separate Customs service, and partly by the inclusion of the Land Purchase annuities in the latter year.

(14) Thus it would appear that during its first five years of independent existence the Irish Free State not only was successful in covering its normal expenditure by its normal revenue, but also during the first three of those years was able to show a considerable margin, which was prudently applied to meeting some part of the extraordinary expenses then accruing, following the example set by Great Britain in the War. By 1925–26 that surplus had practically vanished, so that Mr. Blythe, to secure a balance in his Budget speech in April 1927, was compelled to resort to the imprudent device of taking credit beforehand for savings anticipated on the estimated expenditure.

(15) The prospects for the future are less bright than the record of the past. " Ordinary Revenue " will continue to decline. In 1927 the rate of income tax was reduced by one shilling in the pound; the anticipated loss was £550,000 in 1927–28 and £1,100,000 in 1928–29. This loss cannot possibly be covered by the yield of new forms of taxation; the betting duty is the only one of importance, and there is now no major source of tax revenue left unexplored; the interests affected by some of the major existing taxes—*e.g.* the beer and spirit duties—are urgently demanding reductions, and there is but little ground to hope that a reduction in the rate would be followed by an increase in the gross yield; the alternative of increasing again some of the taxes which have been reduced since the establishment of the Irish Free State—*e.g.* the income tax, the duties on sugar and tea—would be faced with a degree of unpopularity that would make any Minister for Finance wince. The income expected from the new sources of non-tax revenue—the Currency Commission and the issue of

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a token coinage—may be much slower in materialising than is anticipated, and will not in any case go far towards bridging the gap.

(16) "Ordinary Expenditure" has probably reached its minimum. No further significant reduction can be looked for, except possibly in the Army vote. On the other hand, the cost of the Civil Departments and the Civic Guard will be generally on the upgrade, through the normal accession of pay increments and the natural increase of the pension charge; this will counterbalance the falling-off to be expected in the burden of Treaty pensions, the more so since the new Civil Service is much more numerous than the portion of the Imperial Service formerly located in and specifically attributed to the administration of the area now included in the Irish Free State, and shows no tendency to diminish. Further, the restoration of the shilling a week to the Old Age Pension is more than probable,[1] and the demand that the social services provide the same level of benefits as in Great Britain and Northern Ireland is becoming more insistent. The Government is besought continually to undertake new and permanent expenses, and its own Commissions of Inquiry—*e.g.* the Gædhealtacht Commission—all agree in advising additional expenditure; it cannot resist all these importunities indefinitely.

(17) The "Extraordinary Expenditures" directly due to the revolution and civil war will, of course, progressively diminish, but some will continue for a long period. The obligation most recently undertaken on this head—viz. the annuity to the British Government under the Agreement of December 1925—had already come in course of payment in 1926–27, but during that and the subsequent year was met by offsetting claims against Great Britain; it will therefore be an addition to the expenditure in 1928–29. There will be some increase in the gross total of Compensation Stock created under the Damage to Property (Compensation) Act, 1923, outstanding, with a corresponding increase in the charge for interest and sinking fund upon the Central Fund. The gross total of "Extraordinary Expenditures" of a capital nature left to be met by borrowing will go on expanding. The Shannon Fund, the Electricity Supply Board, and the Agricultural Credit Corporation will be making heavy demands. These investments, like the others referred to earlier, are expected ultimately to liquidate their debt to the Exchequer, and in the interval to pay interest upon it; but there is no probability that they will be in a position even to pay the interest for several

[1] It has since been effected.

years, and meanwhile the Central Fund must bear the burden of the interest and sinking fund on the debt contracted in order to finance the investment. It is too frequently and too easily forgotten that every "extraordinary" expenditure set aside as proper to be met by borrowing and not to be charged against "ordinary" revenue increases by a proportionate amount the charges that must be met out of "ordinary" revenue—permanently, if the expenditure be not a reproductive investment; and otherwise for a period which may chance to be of considerable duration, until the investment begins to show a profit.

(18) The conclusion of these speculations is, that up to the end of the last year for which approximately complete figures are available the Irish Free State had safely and sanely made ends meet, with a considerable margin of safety in the earlier years; that by the fifth year the margin of safety had pretty well disappeared; that the prospects for the future are a continuing decline of revenue accompanied by an increase in some important lines of expenditure, without any very great hope for a counterbalancing diminution in others. The risk that the State may find itself not long hence financing its current expenditure out of borrowings is not altogether remote.

(19) Except where otherwise indicated, the sources used have been the following:

(i) For "Other Receipts," "Other Issues," and "Issues for Central Fund Services"—the Exchequer Account [No. I in the Finance Accounts].

(ii) For "Revenue"—the summary of the Revenue Commissioners' Accounts [No. II in the Finance Accounts].

(iii) For expenditure on "Supply Services"—the Appropriation Accounts; these not being available yet for 1926–27, the Exchequer Account had to be used—the error will not be great, of the order of £100,000–£150,000.

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REVIEWS

International Trade. By PROF. F. W. TAUSSIG. (New York: The Macmillan Co. Pp. xxi + 425. 15*s.*)

BY publishing this book Professor Taussig has put a fitting crown both on his own long services to economic science and on the notable corpus of work in the field of international trade which, largely it is to be supposed under his own inspiration, has emanated in recent years from the Harvard School. The book meets a very badly felt need; and students all over the world will have cause to be grateful to the veteran American professor, who, if report be true, by his acceptance of the part of Tariff Adviser to the Nationalist Government of China, has shown that in the practice as well as the theory of international trade he is still thirsting for new worlds to conquer.

The book falls into three parts—an exposition of the working of fundamental theory on the assumption of a universal gold standard, a collection of attempts at inductive verification of the processes asserted by theory, and an annexe on the peculiar features of business relations between countries with independent monetary standards. Of the first part Professor Taussig writes with extreme modesty, not claiming to have added anything significant to the structure of nineteenth-century theory. Yet the examination in Chap. VI of the influence of non-competing groups is conducted with such force and thoroughness that originality is scarcely too strong a word to apply; and the discussion in Chap. IX of the causes determining whether any given commodity shall figure in the list of a country's exports or imports or neither, has shed new light in the mind of at least one reader on the matters debated somewhat darkly in Marshall's Appendix H to *Money, Credit and Commerce.* In any case the exposition is throughout vigorous and lucid. Eschewing both algebra and geometry, Professor Taussig employs only the simplest processes of arithmetic—a choice for which many students will be grateful, though the following out of his arithmetical examples makes considerable demands on the eye and the attention. Particularly admirable is the severance made at the start between domestic and international prices, and the discussion in Chap. V of the inter-relations between these two and money wages; though, as

I shall show later, I think that the teaching of Professor Taussig, as of other orthodox writers, on this topic is liable to misunderstanding and misuse against which they would do well to guard themselves more carefully.

In Part II Professor Taussig, even by his own confession, breaks new ground. In a series of most interesting realistic studies he examines the evidence for the existence of differences between various countries in comparative advantage for the production of various commodities, investigates the mechanism of international payments, and traces the connection between capital movements, the merchandise balance of trade, and the real ratio of interchange or (as he calls it) "net barter terms of trade." I cannot help feeling that in his historical treatment of this last conception, which is so rightly prominent in his whole scheme, Professor Taussig does not emphasise sufficiently the distinction between the command over imports exerted by a given quantity of exports, and the command over foreign effort exerted by a given quantity of home effort. The difference between Mill's units of cotton and linen and Marshall's bales of composite goods, each representing an hour's labour, becomes of very great importance when we are examining movements over a long series of years. Professor Taussig, for instance, gives no hint that a "worsening" of Great Britain's terms of trade such as he detects between 1900 and 1914 does not *necessarily* imply a diminishing command of *British labour* over *foreign goods*, still less over *foreign labour*. If, as there seems some reason to suspect, improvement in the effectiveness of effort applied to manufacture continued unabated during the period, while improvement in the effectiveness of labour applied to agriculture received a temporary check, a fall in the value of machinery in terms of wheat would have been quite consistent with an increasing value of British engineering labour in terms of wheat, and still more in terms of foreign agricultural labour. Incidentally, it may be suggested that Professor Taussig is a little over-confident in predicating of these years a definite worsening of the terms of trade, even as defined by him: the bump in the curve produced about 1900 by a coalescence of trade boom and South African War is easily misinterpreted.

In Part III we proceed to a study of conditions under independent money standards or, as Professor Taussig describes it, "dislocated exchanges." The term is not perhaps very happy, for he proceeds to draw a fruitful distinction between cases where the various monetary systems in question are stable and cases—

such as we have been familiar with since the war—in which one or more of them is undergoing a progressive collapse; and it would seem that the term in question might perhaps have been better reserved for the latter. What is, I think, more serious is that the doctrine of purchasing-power parity, which was preached by Professor Cassel in connection with the latter group of cases, is discussed by Professor Taussig in connection with the former or relatively "normal" group, and is thus treated with something less than justice. This is not the place to expound why I believe that the prevalent fashion of denouncing Professor Cassel's once formidable doctrine as being, when applied to international commodities, a mere truism, is mistaken: but there is, I think, now that the subtler problems concerned with the real ratio of interchange have again become relatively more important and interesting, some danger of our forgetting that, in the particular circumstances in which it was put forward, Cassel's doctrine did splendid and essential service in concentrating the world's attention on *monetary policy* as the single most important cause of the exchange phenomena which then required explanation, and which were being attributed by public opinion and Governmental propaganda to almost every conceivable other source. This is not to detract from the merit of Professor Taussig's own analysis of the other causes which, under relatively stable conditions, may alter the rate of exchange between countries with independent standards—an analysis which is worked out with ingenuity and success.

In the discussion of the alleged bounty to exporters conferred by the process of currency depreciation, I find the opinion that "there is nothing . . . in the history of paper money to lead to a presumption that exchange will rise faster or slower, more or less, than prices" rather surprising in view of European experiences in recent years. Nor do I understand the grounds on which Professor Taussig concludes that the purchase or sale of foreign exchange under a gold exchange standard is likely to be less effective for producing necessary readjustments of international trade than actual movements of gold (pp. 282–4). (It is odd, by the way, that in enumerating the elements of "play" and flexibility in the present American monetary system (p. 213), Professor Taussig does not mention what to most people has seemed the most conspicuous of all—the machinery of "open-market" dealings by the Federal Reserve banks.)

I must compress into a small compass my major criticism of the book, which, as already hinted, turns on a matter of omission.

The demonstration that the relative levels of money wages economically maintainable in two countries are the result of the relative efficiency of labour in the two, and of the conditions of their reciprocal demand, is, so far as it goes, a valuable service and a necessary corrective of crude fallacies. But unless it is supplemented it is apt to be misleading to enthusiastic reformers and unnecessarily irritating to harassed business men. It is so easy to mistake the economist's *assumption* that wages are what they ought to be for a *proposition* that wages ought to be what they are. Readers of the Webbs' *Industrial Democracy* will remember the extremely misleading twist there given in an Appendix to Mill's unfortunately worded dictum about high and low wages in relation to international trade. A vague impression that there is some magic about the theory of international as opposed to home trade which makes it ridiculous to suppose that a country can be pressing on too fast with an elevation of labour standards is all too common. Further, it is surely possible to extend the theory of non-competing groups, so ably developed for specific industries by Professor Taussig, till it covers the whole or the main part of the range of a country's exporting industries. If, that is to say, the members of a nation A can cajole or compel their exporters into working for a lower standard of life than that obtainable in the country as a whole, the scale of international trade will be " uneconomically " extended, to the advantage of the main body of the citizens of the country as consumers of imports, and to the embarrassment of those producers in foreign countries who are in competition with the sweated exporters of A. It is, I think, arguable that something of the kind has been happening in recent years in the world as a whole. With the partial closing of the vast gap which existed in the nineteenth century between the *comparative* effectiveness of different countries in agriculture and industry respectively, it is becoming natural that the world should settle down to a smaller (relative) volume of international trade. Yet friction, prestige, tradition are all on the side of " pushing " foreign trade to the uttermost limit. The result is the problem of sheltered and unsheltered industries. It is, I think, a defect of Professor Taussig's book that this problem is never so much as hinted at in its pages—though it is a problem no less American than British, as the continued outcry of the American farmer bears witness.

I append a list, which may save some readers some scratching of heads, of what seem to be misprints and minor errors. P. 40, l. 23, for " lower " read " raise." P. 68, ll. 6 and 10 from end :

the addition in each case of "in a year" after "made" seems essential to the argument. P. 83, l. 12 from end, for "industry" read "establishment." P. 116, note, the definition of elasticity needs an obvious recasting. P. 139, l. 16, for "imports" read "exports." On p. 200 it is stated that Bank of England notes are fixed in amount: on p. 203 (whereon in l. 17 for "1924" read "1925") it is suggested that the Bank of England rediscounts bills for the joint stock banks; and it is not, I think, clearly brought out that in England under the Act of 1925 the possibility of an internal drain of gold has become a thing of the past. P. 275, l. 14, omit "in doing this than." P. 344, l. 6 from end, for "2*s*. 2*d*." read "2*s*. 6*d*." P. 391, l. 6 from end, for "1924–5" read "1922–3." P. 362, the top sentence makes the wrong suggestion: in the situation under discussion —the necessity to make remittances for purposes of capital export or indemnity payment—the terms of trade will move *more* against England if her demand is inelastic; this is where this case differs from that of an increased urgency of demand for foreign goods.

To sum up, I suspect that Professor Taussig, like most other expositors of his subject (Edgeworth is a conspicuous exception), has erected a structure which is too Panglossian to be proof against all the queer cross-winds which blow in these confusing times; but that need not lessen our admiration for the patient skill and clarity with which he has arranged his bricks or our gratitude that the plot which he has covered is no longer labelled "To Let."

D. H. ROBERTSON

London Essays in Economics in Honour of Edwin Cannan. Edited by PROFESSOR T. E. GREGORY and DR. HUGH DALTON, M.P., with a Foreword by SIR WILLIAM BEVERIDGE, K.C.B. (Routledge. 10*s*. 6*d*. net.)

THIS is a collection of essays written by some of Professor Cannan's pupils. It was a happy thought which prompted them to publish the volume in honour of their great teacher on the occasion of his going down. Some of the contributions hang together and form a unity on topics particularly associated with the name of Professor Cannan, but it is obvious that the editors had no desire that there should be any other connecting link in the collection than the personal one, namely, that all the contributors had served their apprenticeship under one master. The personal note is not emphasised, but the motive is perfectly clear, and those who have been privileged to study under Professor

Cannan will be especially able to appreciate it and will be grateful to the men and women who have written it.

There is considerable variety in style and method, but most of the essays are well written (some extremely well), and there is a fair amount of serious and successful contribution to knowledge, though several writers have written more expansively elsewhere on their subjects. Certain internal evidence may be found that some of the writers have been under a common influence, but there is none to suggest that they all belong to a " school " founded by their teacher " in the sense in which Marshall and certain foreign economists are said to have performed that operation " (p. 7). Variety of opinion is no demerit of such a collection; one would rather urge it as a tribute to the independence of their thinking and the excellence of the method of their training. " 'Founding a school' may easily be carried too far, so as to result in the over-standardisation of ideas and a too mechanical use of terms and processes of reasoning " (p. 8).

Dr. Dalton's essay on Professor Cannan's general contribution to economic thought is excellent, but there is not enough of it. He gives a well-balanced judgment on Professor Cannan's method, holding the scales evenly between that method and Cambridge : " Economic science, in Professor Cannan's hands, is very conspicuously common sense. Nor does it err by being too highly or artificially organised. It is rather a bluff common sense, non-mathematical, without humbug or pretentiousness, and practising a strict economy of those technical terms which so easily degenerate into clumsy and æsthetically repulsive jargon. There is here no excessive abstraction, no pomposity of doctrine, but always a keen sense of reality. Compared with some economists of the Cambridge school, he is apt to appear relatively unsystematic, and to judge questions more on their particular merits and less as special illustrations of far-reaching general propositions. Neither this method nor that is obviously the better. They are alternative modes of the search for truth." Of course most economists like to think they use common sense, but there is a certain danger in elevating it to the dignity of a method. There comes into mind, for instance, Professor Cannan's treatment of the meaning of the term wealth in the book of that name, where it is defined as material welfare, material happiness, etc.—which sounds like common sense but is extraordinarily lacking in the precision Professor Cannan can and does show in other places. Again, in the discussion of which takes priority, Equity or Economy, as a principle of taxation, one has the feeling that

though there is a great deal of common sense in the position taken, there is a good deal below the surface that requires digging up. Are Equity and Economy alternatives, or are they simply different kinds of judgment? One is an ethical idea and the other is economic.

The fiction that Professor Cannan is merely an iconoclast Dr. Dalton effectively deals with by showing the large quantity of constructive work that is contained in his teacher's works. On monetary theory, population, distribution, the economic importance of social institutions such as property and inheritance, and his treatment of isolated man, Dr. Dalton easily shows that Professor Cannan has built as well as broken. After all, in his great critical work, the *Theories of Production and Distribution*, though there is an extremely high degree of sensitiveness to error, the main theme is positive: the development of ideas rather than their inaccuracy is his chief concern.

Perhaps Dr. Dalton gives a little too much space to Professor Cannan's attitude towards Socialism, and he is also perhaps a little inclined to see more of the socialist in his hero than others can perceive. A little less of this and more on Professor Cannan's social philosophy would have been better. On the whole, more space might have given Dr. Dalton an opportunity to produce a more thorough appreciation rather than description of the contribution made.

Professor Gregory writes an extremely lucid, straightforward essay explaining the position taken by Professor Cannan on all important monetary and banking issues, theoretical and practical; it is a model of order and completeness within the limits of his space. He objects to Mr. Keynes' observation that Professor Cannan is unsympathetic with "nearly everything worth reading that has been written on monetary theory in the last ten years," and argues that in accepting the monetary explanation of the trade cycle Professor Cannan is in line with "advanced" views. Since "it is not so important to be fashionable as it is to be correct" (p. 60) it is not necessary for Professor Cannan, in accepting this monetary explanation, to commit himself "to current dogmas as to the nature of bank credit and the relation of loans to deposits or of bank policy to currency control," and the proposition "that bankers are in a position completely to eliminate the trade cycle by control of credit."

Mr. Lionel Robbins undertakes the treatment of the "optimum theory" of population propounded by Professor Cannan, and makes a definite and valuable contribution to the literature of

this subject. He sketches the history of the theory and its connection with Diminishing Returns, and shows most excellently the implications of "other things being equal" when the optimum number on a given area at a given moment is being considered. "With the collapse of the old theory of dynamic diminishing returns," he says, "there has arisen a real need for a chapter in Economic Theory which shall discuss and classify the main causes influencing the position of the optimum" (p. 129 n.). It is to be hoped that Mr. Robbins will apply himself to the task soon.

Miss Buer, in a style strongly redolent of Professor Cannan's "bluff common sense" and of his sense of humour, gives the historical setting of the Malthusian controversy, and disposes of the idea that the Malthusian point of view was widely accepted because England was actually over-populated in the early nineteenth century. She attributes the origin of the opinion to the pessimism induced by the widespread distress which happened to accompany the great growth of population, but the distress was due to war and "its twin devil inflation," and the growth of population was due to improvements in agriculture, transport and medicine.

There is an extremely interesting account in Professor Plant's essay of the methods of financing business in South Africa since the depression of the 'eighties, when the bill system was abandoned in favour of strictly cash transactions. Mr. Benham sets out to prove that economic laws triumph over Government interference, but concludes by remarking that Australian regulations have "somewhat altered the relative values of different types of work." Legal conceptions of capital and income Dr. Robson shows to be somewhat confused, and he makes the practical suggestion that there should be an economic assessor to assist judges in defining terms. But it might be awkward if we had economists as expert witnesses also! Dr. Burns' essay on coinage seems more interesting to numismatists than to economists, though some of the latter may like it. Considerable penetration is displayed in the essay by Mr. Mitrany, in which he reveals the fundamental clash between Marxism and the aspirations of the European peasantry. Mrs. Burns is provoking in her discussion of productivity and its relation to wages. She favours the "frank recognition of the emptiness of the word productivity," but she is not very convincing in her choice of a theory of wages.

A. RADFORD

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Studies in Economic History: the Collected Papers of George Unwin. Edited with an Introductory Memoir by R. H. Tawney. (London: Macmillan. 1927. Pp. lxxiv + 490.)

It was right to collect Unwin's papers. It is not always right to collect papers because some men have degrees of thoroughness in workmanship, or of recklessness in the spending of themselves on it, varying with the end in view. Unwin had not. There is as much learning and at least as much—what shall we say?—prophesying perhaps, in a little discourse read before some casual vacation conference as in lectures given by invitation before his old University. Most of the papers are reprints, the chief exceptions being a lecture on mediæval city origins (The Roots of the City, p. 49) delivered at Manchester in 1911; the already well-known Oxford lectures of 1913 on the Elizabethan Merchant Adventurers (pp. 133—220), and some fragments of a projected History of Commerce (pp. 221—61). It is an immense convenience to have these in one volume with the reprints, because no one keeps on his shelves the *Victoria County History of Suffolk* plus the *Transactions of the Manchester Statistical Society* and a *Cyclopædia of Education* published in New York, yet everyone wants to have the whole work of the man who was probably the foremost economic historian of his generation. The teacher can dip into it when he is preparing to teach and the writer when he turns to his writing. And whatever his topic he will do well not to omit to take his *sortes Unwinianæ*. That is, if he is an historian: for the economist it is perhaps less essential.

There was not much of the economist *pur sang* about Unwin. Bred in the Classics and in Greats, he studied in Germany more or less under Schmoller. (He was not the man to be very much under anyone.) His years of secretaryship to Lord Courtney (1898–1908) deepened the native individualism of Stockport, but left him a social philosopher and institutional historian. Economic institutions were the most universal, the most spontaneous, and together with religious institutions—in which also he was passionately interested—the chief homes of that spirit of unconstrained fellowship which was God in history. So far, yet with the reserved right to occupy himself with any occasion on which two or three were gathered together in brotherhood, he was an economic historian. I do not know how it was with some parts of his teaching: he cannot have neglected these things: but he did not write by preference about statistics or quantities. It is easy to picture him commenting on town-plans. He seems to

have carried the plans of most towns of Europe, and some others, in his head (see p. lv). It is less easy to think of him elucidating a system of graphs.

The paper, here first printed, on The Roots of the City, shows Unwin the institutional historian with special economic knowledge, at his best. Much has been written about city origins. Not even Pirenne has written better.

The Oxford Lectures on the Merchant Adventurers bring out what might be called, without more than a touch of exaggeration, his hatred of the compelling and warring State, of Leviathan. *Non est potestas super terram quæ comparetur ei. Potestas*—antithesis of *fraternitas*. An essential Christianity, with the dash of anarchism which that often implies; a native reaction against the worship of *Macht* which he had found spreading in the Germany of the 'nineties; something like disgust at the wallowings of Leviathan, seen from where the mud was splashing and Courtney was noting the fall of each fleck, in the years of the Boer War—all helped to prepare him for what, in the narrowest technical sense, was one of his chief "original" contributions to English economic history, a series of demonstrations that the State, and compulsory monopolistic corporations established by it, had a great deal less to do with the growth of English industry and commerce than some people had hinted and others—mostly Germans these, from List downward—had confidently asserted.

This is really the central theme of the lectures on the Adventurers, as it had been that of his essay which proved—contrary to an opinion generally, if too lightly, received—that Edward III had no economic policy, least of all a "free trade" policy, the essay which converted Cunningham. (The strictly financial part of the Adventurers lectures either had been anticipated by, or was based on, the work of Dr. Scott.) Unwin refused to see in the dog-fight between Adventurers and Hansards any "world-economic" decision. Two groups of monopolists fighting for monopoly; the Hansards rather the preferable of the two, because, while they were still in the field, the English cloth industry had two channels of export instead of only one, and that stinted; but behind, beyond and above both, the main "natural" forces of growth and intercourse working through English interlopers and German traders who had no lot in the Hanse towns—that, or something like that, is the picture.

Demonstration, against some German scholar or other, that the Adventurers were not a well-handled tool gripped by a fore-

and perfectly clear-sighted mercantilist State to carve out for itself *Wirtschaftsmacht*, is easy—perhaps a trifle overdone. I fancy no Englishman who has ever stood close to the Elizabethan statesmen has believed in that diabolic foresight. Certainly their corn policy, to take a single instance, was almost as short-sighted and full of contradictions as that of France before the Revolution.

The delightful fragments of chapters for a history of commerce cannot be judged adequately, just because they are so fragmentary. They do suggest, however, one friendly criticism—that Unwin had never quite got over those architectural difficulties of book-building, which must have worried him, as they certainly have some of his readers, in his first two books, *Industrial Organisation in the Sixteenth and Seventeenth Centuries* and *The Gilds and Companies of London*.

One of the best things in the book is Mr. Tawney's biographical notice of his friend—a selfless scholar, always giving, always thinking other people's work better than his own and better than it was, the man who would not review a book unless he could speak well of it, who died at fifty-five worn out with work for learning, his pupils, and mankind.

J. H. Clapham

On Stimulus in the Economic Life. By Sir Josiah Stamp, G.B.E. (Cambridge University Press. 1927. Pp. 68. 3*s*.)

Doubtless there are many economists who, like the reviewer, pick up anything newly written which appears to have to do with the psychological aspects of economic or social life with foreboding, hardly hoping to find anything new save perhaps a new jargon. If the author's name lures them into hazarding an hour or so upon this little book (in which the Rede lecture at Cambridge in 1927 is made available to a larger audience) they will find themselves repaid and encouraged. Sir Josiah Stamp has a real problem in mind, he formulates his problem with care, and he pursues it a little way along each of a number of promising roads. Stimulus is an "increment in incentive," and is to be distinguished from changes in "scope." Thus increased supply and lower prices, with no change in the demand schedule, give larger scope but no new stimulus to demand, and lower interest rates, similarly, merely give large scope for business enterprise. There is an important difference, moreover, between the kind of stimulus which supplies fresh energy and the kind which, like a catalytic

agent, merely releases energy. Account must also be taken of the permanent as well as the immediate results of a stimulus. The immediate gain may or may not be followed by a reaction, and the permanent gain or loss may be full or partial. Similarly, repeated " doses " may have a constant, diminishing, or increasing effect.

By means of these abstract considerations the author succeeds in giving unity of interest to what he says about the known characteristics of the stimulus of drugs, of alcohol, tea, etc., of fertilisers, of stimulus in " the physiology and psychology of labour tasks," of experimental psychology, and, finally, of " economic stimuli." Inflation attended by rising prices is held to be a true (though unwholesome) stimulus to business enterprise. Just as one is about to charge the author with inconsistency in making rising prices a " stimulus " while holding that falling interest rates are merely a change in " scope," one reads, in relation to the stimulus given by a relief from super-tax, that " the distinction is not always clearly marked," and that " the enlarged scope itself may give zest to a jaded incentive." Also, one may add, the activities evoked by an increase in scope prompt or stimulate other activities. But the distinction is none the less important, and it is a just remark that in the literature which deals with industrial fluctuations, " the ideas of automatic scope and motival impetus are confused under the one set of terms."

There are some shrewd observations respecting the necessity of distinguishing among different economic stimuli according to the nature of their permanent results and the nature of the reactions which they breed. Thus, speaking broadly, " the monetary factors in fluctuation, however stimulating, are nearly all of the self-reaction type, and what one gains on the swings to-day is lost on the roundabouts to-morrow." Such considerations lead naturally to a discussion of the value of " rhythm " as compared with the value of stability—a question of the utmost importance, which was pretty completely ignored by writers on industrial fluctuations before Mr. D. H. Robertson wrote his challenging little book on *Banking Policy and the Price Level.* The question, as the author suggests, " probably resolves itself into a contrast between the advantages of a perfect development of existing institutions, and the advantages of radical improvements and increments of revolutionary change from the gross value of which have to be deducted the losses and disadvantages of disturbance and destruction in human and physical or invested

capital." But "Prosperity, not Necessity," he concludes, "is the mother of invention," for "in a time of abundance of resources alone can large-scale inventions and improvements be undertaken." A true conclusion, I think, but not the whole truth. We have to distinguish between the devising and planning of improvements and the widespread utilisation of them, as well as between an "abundance of resources" and an abundance of opportunities for their profitable use. May it not be that acute depression and an unusually high level of "prosperity" (*i.e.* an unusually high level of business profits) are inimical, the one to the adoption of and the other to the search for real improvements?

There are many other points at which the book invites quotation and comment—which is another way of saying that Sir Josiah Stamp's discussion of stimulus is itself a stimulus to thought.

ALLYN A. YOUNG

The Stabilisation of the Mark. By HJALMAR SCHACHT. (Allen and Unwin. Pp. 247. 8*s.* 6*d.*)

Report of the Commissioner of the Reichsbank, December 1927.

A MOST cordial welcome must be given to the English translation of Dr. Schacht's book on the stabilisation of the German currency. There can be no need to emphasise either the importance of the subject or the peculiar qualifications of the author to deal with it. Economists will naturally turn to the book as the most authoritative source of information on one of the most interesting cases of currency stabilisation; and in this respect their expectations will be amply fulfilled. But in addition they will find a most absorbing story. Throughout that story, politics, international and domestic, play a large part, whilst in the critical period we are given the more personal drama of decisions speedily taken and resolutely maintained in the face of gravest difficulties. Many of the events which Dr. Schacht relates reflect greatly to his own credit, and we read of them with the more enjoyment because he writes frankly, without affecting undue modesty.

From the point of view of the economist, the opening chapters which lead up to the crisis of 1923 are not all of the same value. The first chapter, dealing with the war period, seems entirely adequate; the succeeding chapters on the post-war years of inflation leave one with certain doubts. While Dr. Schacht is disposed to criticise the financial policy of the Reich during the war, he appears to place the whole responsibility for the subse-

quent collapse of the mark on the reparations policy of the Allies. With this view not all German economists, I think, would be found to agree; and in any case, assuming that Dr. Schacht is broadly right in his verdict, the theorist will feel the need for a much closer analysis of the causal relations between changes in foreign exchange rates, internal prices and money in circulation.

But the really important part of the book begins when we reach the final crisis in which Dr. Schacht himself took command, first as Commissioner for Currency and later as President of the Reichsbank. The plan for the creation of the Rentenbank and the Rentenmark had already been drawn up before his appointment; but the introduction of the new currency, the establishment of a fixed relation between the new currency and the old, and between both and the dollar—these were almost entirely Dr. Schacht's achievements, and here we have his own account of the measures by which they were accomplished.

For Dr. Schacht's reputation it suffices that these measures were successful, and chaos was converted into order. To advance the theory of the matter, however, we require to know whether in the given circumstances stabilisation could have been attained in any other way. This seems to involve three questions: (1) Could the old mark have been stabilised at a higher value? (2) Was it necessary to introduce a new currency? (3) If so, was the Rentenmark the best form for the new currency to take?

The second question is in some ways the crucial one, and unfortunately it is one which Dr. Schacht does not directly discuss. His general account of the situation, however, rather confirms one's impression that the old mark had become too far discredited to be made to stand alone as a stable unit of account. (It might be argued further that any policy based simply on restoring confidence in the existing currency would have had to have begun with a drastic restriction of further issues; that this was impossible with the existing condition of the public finances; and that the latter could only be put in order after a measure of stabilisation had first been achieved.) If the need for a new currency is conceded, Dr. Schacht is able to make out a good case for giving the old money a low rating in order to make room for the new and give him more effective control of the situation. With regard to the form of the new currency, it is interesting to notice that Dr. Schacht was at first opposed to the Rentenmark on theoretical grounds, but later came to recognise its important practical advantages from a political point of view.

Dr. Schacht justly claims that the process of stabilisation was

completed before the adoption of the Dawes plan and without any *political* assistance from outside. (There was, of course, the assistance of foreign bankers in setting up the Gold Discount Bank.) It is admitted, however, that the signing of the London Treaties first secured the German currency against external political dangers and prepared the way for a large-scale resort to foreign loans.

The influx of foreign capital appears to have been the chief factor in the recovery which has taken place in Germany since 1924. But it has also provided the post-stabilisation problems which have given Dr. Schacht most anxiety. How far his apprehensions are well founded has been the subject of much controversy in Germany. The more general view appears to be that they are exaggerated, and it cannot be said that his treatment of the question in this book is at all points convincing. It does not seem to matter, for instance, if the loans increase German imports, since at the same time they provide the means to pay for them; and if at first there is a certain rise in German prices, owing to the exchange of *Devisen* for notes, is not this simply the mechanism by which the real payment of the loans in goods is brought about? Misgivings are more intelligible if they relate especially to short-term foreign borrowing—the kind of borrowing least amenable to control. Here the possibility has to be reckoned with that the foreign exchange proceeds may be dissipated, so that difficulty may be experienced in finding the means of repayment when called for; and it must be admitted that this danger is enhanced by the presence of the Reparations-Agent, ever looking for opportunities to effect his transfers. But Dr. Schacht is surely mistaken if he means to suggest that the utilisation of the exchange proceeds of foreign loans for reparations transfers (p. 232) deprives German industry of the capital it requires; for the borrower then gets his loan in German money paid out of the Reparations Account. Apart from the complication mentioned above in connection with short-term loans, the present effect of borrowing abroad must be to simplify the transfer problem all round. The ultimate effect depends, of course, on how far these loans increase Germany's capacity to export or reduce her need of imports: a consideration which may justify Dr. Schacht's insistence that they should only be resorted to for "productive" purposes.

Dr. Schacht's book was written in the latter part of 1926. The English reader will most easily follow the subsequent developments of German currency and credit in the Reports of the Com-

missioner of the Reichsbank appointed under the Dawes scheme. No one believes now, I hope, that the presence of this foreign official is necessary to ensure observance of the Bank Law; but Dr. Bruins does much to justify his office by writing these reports. Published twice a year, they provide us with a wider survey of the conditions affecting the Reichsbank's policy than is given in the Bank's own annual report. The accompanying tables and diagrams are particularly useful for reference purposes, but the explanations and additional information given in the text will also be found very valuable. On the whole the Commissioner seems to take a rather more sympathetic view of German credit policy than that of the Agent-General for Reparations.

P. B. WHALE

London School of Economics.

The Restoration of European Currencies. By D. T. JACK. (P. S. King & Son. 1927.)

THIS book deals with monetary reconstruction in the countries of Europe, with the exception of Hungary. It includes, however, an account of the French franc and of the Italian lira, which had not been officially stabilised at the time of writing. Mr. Jack is largely concerned with the questions of under-valuation and over-valuation, and with the stabilisation difficulties which arise out of a discrepancy between the internal and external values of a currency. The stabilisation crisis, it may be noticed, does not develop of itself, as is assumed; it occurs only when the Central Bank intervenes, as it must do if the stabilised rate is to be maintained.

The problems of under-valuation and over-valuation are naturally introduced with a discussion of the Purchasing Power Parity doctrine, which Mr. Jack briefly describes. His definition, however—" The internal value of the currency as measured by its purchasing power parity and its external value as measured by the actual exchange rate will be in equilibrium "—is not remarkably coherent. It is unfortunate, moreover, that having stated the theory he should occasionally neglect its application. It is suggested, for example (p. 40), that from the standpoint of the national finances considerable advantage might be derived from the appreciation of a currency with respect to the payment of foreign loans contracted on a gold basis, the number of units of local currency to be provided being thus reduced. It should be obvious that there is no possible advantage of this kind to be

"set against the increased real burden of the domestic debt." Again, in the discussion of the Lithuanian exchange the argument used has a strong flavour of mercantilism. "The absence of important invisible trade items of income," it is asserted, "adds to the necessity of securing a favourable visible balance" (p. 196). Here the accumulation of foreign balances by the Central Bank takes the place of an accumulation of the precious metals.

The discussion of currency conditions in the separate countries shows the enormous range of the problems which are involved. There are the contrasts between gold bullion and gold exchange standards, *de facto* and *de jure* stabilisation, deflation and devaluation. These contrasts need to be clearly drawn. A policy which aims at going back to an original gold parity, involving a rise in both the external and the internal values of a currency, merits a different sort of treatment from a policy of devaluation on the basis of a rate actually attained. Mr. Jack rightly adopts "restoration" in the title of his book.

However dramatic the fluctuations and collapse of mark, rouble and crown may have been, the Rentenmark provides perhaps the most interesting chapter in recent monetary history. Attempts to issue a second inconvertible paper currency after the collapse of the original currency have generally resulted in failure; and it is remarkable that the stability of the Rentenmark survived until the introduction of the Dawes plan.

Mr. Jack discusses finally the Genoa resolutions and the prospects of the future. Here he understates the case for economy in the use of gold, when he refers to recent tendencies in the direction of a "diminishing" gold output. The case depends, of course, not on any hypothesis about diminishing gold output, but on the question whether an increase in the rate of production adequate to the world's requirements can be expected.

The book suffers unfortunately from some misprints and some minor inaccuracies.

E. L. HARGREAVES

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Oxford.

Money and Monetary Policy in Early Times. By A. R. BURNS.

MR. BURNS's subject is the monetary history "of the first thousand years of coining," that is to say, the period from Crœsus to Constantine. There is a great wealth of material, but not in a form ready for use by the monetary theorist or economist.

There is a dearth alike of statistics, of contemporary discussion and of the texts of regulations and laws on monetary subjects. In every direction the investigator has to fall back on conjecture, and the subject has tended to fall into the hands of archæologists and historians who are experts in the sifting of historical evidence, but not in the application of monetary theory to their conjectures.

Mr. Burns's task is to interpret the facts in the light of monetary science as developed in recent years. The book he has produced is both important and interesting.

He has had to cope with a peculiarly baffling problem in the arrangement of a great quantity of data of which the interpretation is almost always open to doubt. He has elected to group his material mainly under headings related to monetary theory, such as fineness of coins, units of weight, standards, subdivisions of coins, token coinage, the prerogative of issue, monetary policy. A certain amount of repetition might perhaps have been avoided by a purely chronological arrangement: one of the many interesting aspects of the subject is the essential unity it reveals in the economic system of the ancient world (exclusive of China), and a chronological arrangement need not, therefore, have cut inconveniently across geographical boundaries.

Coins have for a long time ranked high among the surviving evidences of ancient civilisations. In the hands of an economist skilled in monetary theory they become all the more informative.

Occasionally Mr. Burns projects modern ideas a little too freely into the past. It is not very convincing to say that "Elagabalus discovered that a rapid inflation, although it yielded a profit because prices did not rise as quickly as the supply of coins was increased, had the disadvantage that it reacted against the State whenever it was a creditor." Did some forgotten ancestor of Professor Irving Fisher sit at the elbow of Elagabalus?

Nevertheless Mr. Burns is obviously right to insist on the applicability of the monetary doctrines of the twentieth century to all times. His book shows again and again how ignorance of monetary theory has introduced unnecessary obscurity into the views of historians and antiquarians. The need to criticise their blunders and to expound their rather sketchy arithmetic is a serious complication in any treatment of the subject.

An attractive and valuable feature of the book is the collection of plates reproducing photographs of typical coins.

R. G. HAWTREY

The National Dividend. By JAS. T. SUTCLIFFE. Melbourne University Press, Economic Series, No. 1. (Melbourne. 1926. 8vo. Pp. x + 70. 3*s.* 6*d.* net.)

THIS brochure, giving an account of an inquiry by its author into the amount of the National Dividend of Australia and the manner of its distribution, is issued in this country by Messrs. Macmillan & Co. The inquiry, it is explained in a foreword, was awarded a scholarship, one condition of which is the publication of the thesis submitted. Professor Bowley has written a letter, reproduced as a preface, expressing some general opinions about the thesis. He included in his letter some warnings regarding the manner in which the work was planned and executed, which the author has treated as not requiring from him serious reconsideration of his results. In accompanying those warnings by a statement that "it is evident that Mr. Sutcliffe has possessed critical knowledge of his material, and has correctly used the methods that have been satisfactory in other countries," Dr. Bowley has, perhaps, permitted courtesy to override his natural criticism.

Mr. Sutcliffe, finding a table in the Production Bulletin (from which he quotes later corrected figures, though giving a reference to the first of the issues in which 1920-21 was covered), the title of which is "Estimated Value of Australian Production," has assumed that the aggregates of the table are to be interpreted as connoting an equal value of work of production. The table shows the total values of crops, of pastoral, dairy, forestry and fishery and of mining products, with the "value added in manufacture" for industrial output. A closer acquaintance with his material and with other writings on the subject would have shown the author that the addition of the value of hay and green forage to the value of meat, wool or dairy produce in the production of which these feeding stuffs were used is a procedure certain to yield misleading results. The application, too, of the general allowance of 10 per cent. for renewals and replacements so as to cover grain used for seed seems a doubtfully reliable course in dealing with a country whose best wheat crop for a dozen years past averaged only sixteen bushels to the acre, and where wheat has provided 30, 40, 50 or more per cent. of the aggregate of crop values in different recent years. With the assumption that the average net output of workers in small establishments not covered by the Census of Manufacturing Production may be assumed as equal to that of the workers in the factories covered by the

Census, with all the equipment of appliances and mechanical power which should add to the efficiency with which the work is carried out, it is difficult to agree, and it is equally difficult to accept, on the general ground of numbers engaged, the estimate of an all-round cost of 20 per cent. of the total estimated production for distribution services. In different years the proportion of the production in respect of which the charges for distribution do not arise or are relatively small may well vary greatly, and some inquiry regarding the amount subject to those charges seems desirable if not imperative.

The alternative method of arriving at the total National Dividend by adding up incomes, which is claimed as yielding the same total as is calculated from the faulty use of the production data, must necessarily be examined to see if any equally serious defect is revealed in the procedure on this side. We note that the process used for calculating the total assigned as wages and salaries gives as the proportion of this total to the calculated National Dividend, 57·2 per cent. in 1920–21 and 66·6 per cent. in the following year. Such a violent change appears to need explanation if it does not constitute a challenge to the correctness of the procedure of calculation. Perhaps not a little of the responsibility may be traced to the fact that the Census year selected as the base year for the series of calculations happened to be the year 1920–21.

The lengthy examination of wage rates and numbers of wage-earners for whom those rates may serve as a basis of calculation of income leads to the adoption, as a general average for the adult wage-earner not subject to income tax, of a figure identical, to the next unit, with the average of wages and salaries paid to all persons covered by the Census of factory production, from which an arbitrary deduction of approximately 10 per cent. is then made in consideration of the influence of tax-paying employees of the factories on the general average remuneration. In determining the amount of this deduction there is clearly room for a considerable approximation of the result of the income calculation to the lower total suggested above as necessary for the estimate based on production data, especially as the Group affected includes practically half the recipients of income, and 36 per cent. of the calculated income is assigned by the author to these breadwinners.

While it appears necessary to make the foregoing commentary on the methods and conclusions reached by Mr. Sutcliffe, and while the difference between the amount per head of the National Dividend in Australia as calculated by him (£60 per annum)

and as shown in the most recent calculation of Sir George Knibbs (£54 per annum) does not appear to be substantiated, his brochure assembles the main data which must be reviewed in any assessment of the magnitude of the National Dividend, and may thus assist readers in this country to form an opinion regarding the relation of this aggregate in Australia to the corresponding aggregate in this country. As an authoritative determination of the object of study, however, it leaves a good deal to be desired, and cannot be held to have forged a new link in the chain of records by which the fluctuations in national production may be traced.

A. W. F.

Technischer Fortschritt und Uberproduktion. By Dr. L. V. Birck. (Jena: Gustav Fischer. 1927. Pp. 26.)

This pamphlet attacks the old question, " Is general over-production possible ? " from a new point of view. Our existing economic institutions produce on the one hand a mass of goods that cannot find purchasers, and on the other a permanent residue of work-people who cannot find employment. The capitalist would seek a remedy in lower wages, while the socialist attributes the evil to a superfluity of capital. Dr. Birck agrees with neither. He reviews successively the doctrines of the classical economists, of Marx, Frantz Pio and J. A. Hobson. The first-named clung to the erroneous belief that modern society was nothing but an enlarged edition of the simple natural state, and that over-production being obviously impossible in the latter, could not take place in the former. The Socialists had the merit of detecting the flaw in this argument. Marx, on the other hand, confused the issue by his doctrine of the necessarily diminishing wages of labour. Pio and Hobson alike lay stress on the fact that increasing production, unaccompanied by increasing purchasing power in the hands of the people, leads to a general glut. This increasing production Hobson attributes to the fatally " easy " saving of the rich, which he would discourage by raising wages and equalising incomes by means of taxation.

The fallacy of the Socialists, Dr. Birck points out, lies in their failure to distinguish between the effects of (*a*) accumulation of capital, and (*b*) improvements in technique: two totally different factors. An increase of capital devoted to industry is bound to result in a rise of the rate of wages and a fall in the rate of interest. On the other hand, improvements in machinery and processes

which are not accompanied by a corresponding increase in capital will cause unemployment and a lack of effective demand for the goods placed on the market. Poverty is due to the discrepancy between available capital and existing technique. Consequently the diminution of saving so passionately urged by Hobson would aggravate instead of remedying the disease. What society requires to-day is not less, but more, capital, to keep pace with technical progress.

If we cannot accumulate capital fast enough—and there seems little chance of this in post-war Europe—Dr. Birck suggests that the situation can be saved by introducing multiple shifts, thus extending production and diminishing costs, while increasing the numbers employed and therefore the purchasing power of the workers. Even so he thinks we shall not succeed in employing productively all the available population. It is a peculiarity of capitalist development that the proportion of the population so employed tends progressively to diminish. Two-thirds of our number can probably produce enough to meet our total requirements. With a flash of unexpected irony Dr. Birck remarks that the remainder need not perish, since they can be employed as servants, dancers, possibly as poets and artists. This, however, appears to be a side issue. The main argument is that the condition of glut from which we so frequently suffer is due to a temporary maladjustment, to a failure of capital to keep pace with technical progress, and can be most easily rectified by the introduction of additional working shifts. This solution is not likely to appeal to the school of reformers who see in over-production a *reductio ad absurdum* of our existing economic organisation.

H. REYNARD

Wages and the State. By E. M. BURNS. (London: P. S. King & Son. 1926. Pp. ix + 443. Demy 8vo. 16s. net.)

MRS. BURNS in her sub-title describes her book as a comparative study of the problems of State wage regulation. This, as the publishers rightly maintain, is becoming an increasingly important feature of industrial organisation, and the proper adjustment of wages generally constitutes a vital aspect of industrial relations. At the same time it is doubtful if the general principles of the subject, or the implications which arise from them, have in all cases been fully worked out or submitted to the test of detailed study and analysis of facts. This, indeed,

is well brought out by Mrs. Burns herself, in her examination of the three chief principles of wage regulation: the Living Wage based on what is sufficient for a decent livelihood; the Fair Wage, calculated, in Marshall's words, to be "about on a level with the payments made in other trades of equal difficulty and disagreeableness"; and what the trade can bear. For she shows that the mere statement of each principle brings to light a number of problems, and that too often the supporters of a principle fail to realise these problems, and still more to suggest adequate solutions for them. Consequently her detailed examination of the whole matter of State regulation of wages is a piece of work which much required to be done; and its thoroughness makes it a real contribution to the theory both of State regulation and of the wage problem generally.

The admirable system of arrangement will enable the reader to utilise the book either for practical or theoretical purposes. Its three parts deal with the three chief aspects of the subject: what the regulations are (Laws of Wage Regulation), which includes a discussion of the law and practice of different countries, their practical application (Problems of Technique), and their underlying principles (Problems of Principle). Such an arrangement appears to have been modelled—and a better model for the purpose could scarcely have been chosen—upon *Industrial Democracy*, with its tripartite division into Trade Union Structure, Function and Theory. This has the great advantage of keeping distinct the main sides of the problem, and so enabling anyone of them to be studied separately. In less skilled hands than those of Mrs. Burns, indeed, such an arrangement might have involved excessive repetition; but this she has been successful in avoiding. The reader is further assisted by short summaries of conclusions, which terminate such of the chapters as appear to require them.

The objects of wage regulation, as the book points out, have been, first, to provide a remedy both for sweating, properly so called, and for low wages generally, and, secondly, to deal with industrial unrest. These distinctions may be seen in the difference between the British Trade Board Acts of 1909 and 1918, the first being limited to pronouncedly sweated conditions and the second having a far wider scope. The presence of these different objects and the close connection between them is brought out by the study (Chapter II) of the legal machinery of wage fixing, the Fixed Minimum Wage, the Board System, Arbitration and so on, and in the thorough and interesting examination (Chapters XII and XVI) of the principles of wage fixation.

The conclusion reached is that no one of the three principles already referred to is complete or adequate in itself; for "there are definite limits to the use of each." Indeed the real solution may rest in a balance of all three. This seems to be the case with the Australian distinction between the basic and secondary wage. The former is determined by the Living Wage principle and the latter "would be affected by considerations of what the trade could bear and the Fair Wage principle." The "living wage," Mrs. Burns points out, has a special bearing on productivity. "Where low productivity is the result of a low wage, the conception of the living wage provides a useful basis." Possibly she does not allow sufficiently for what can be done to improve wages by the application of the Fair Wage principle, and insists overmuch on its tendency to standardise existing practice. For it can be, and is, used, as in the British Fair Wage Clause, to make general not the average standards of a trade, but the Trade Union minimum or the standards of good employers; and this may well lead to an increased productivity and eventually further increase in wages. The same is true of what the trade can bear, when rightly applied to what the good employer can pay. For, as with the English Trade Boards, this not only involves a direct increase in wages, but, by removing the unfair competition of sweated labour, may immediately increase capacity to pay, and by improving efficiency and productivity may ultimately increase it still more. The living wage principle is specially valuable, as with the Australian basic wage, to protect against unduly low wages, and to keep in view ideals of a reasonable and decent standard for all, such as Mr. Rowntree's "human needs minimum." The other principles are valuable in helping to secure for the workers the best that existing conditions allow and in obtaining for them a fair share in any increased productivity.

A valuable feature of the book, the more so that the need of right distribution is kept clearly in view, is the insistence that "the general level of production plays the biggest part in determining the general level of wages." This is well worked out and applied both to general wages and to wages in particular trades. Moreover, whilst clearly sympathetic to the labour point of view, the author rightly insists on the need of enforcing awards, not only against recalcitrant employers, but against Trade Union efforts to force wages above the legally fixed limits and against other breaches of law or agreement. The chapter on Inspection and Enforcement is thus specially suggestive, and the emphasis on the difficulty and necessity of proper detailed enforcement

affords an interesting parallel with the history of Factory Legislation.

It is not the least of the book's merits that it realises and emphasises the real difficulties of the subject, insisting that progress and improvement will come from no quick and easy solution, but from hard and patient application. To this, the author has added a real grasp of her subject, a thorough knowledge of the facts, and a clear and reasoned presentment of them. There is a suggestive discussion of principle in the third part, and an admirable summing up in the two concluding chapters. The work thus makes a real contribution both to the study of the wage problem and to economic thought.

N. B. Dearle

Der moderne Kapitalismus. Dritter Band. Das Wirtschaftsleben im Zeitalter des Hochkapitalismus. In 2 Parts. By Werner Sombart. (München and Leipzig: Verlag von Duncker und Humblot. 1927. Pp. xxii + 1064.)

With these two stately volumes Sombart concludes the revised edition of his masterpiece on Modern Capitalism. The work was first issued in 1902 and at once created a stir. Here was a new conception of capitalist theory; here were new terms, new methods, and above all a provocative style. For fourteen years economists and historians in Germany carried on lengthy discussions as to the validity of Sombart's history or as to the orthodoxy of his theory. So widely read was the book that in due course a new edition became necessary. The first volume of the revised edition appeared in 1916, and the second (in two parts) in 1917. The third volume (likewise in two parts) bears the imprint 1927.

In the first volume the author considers the economic organisation of society in what he terms the "pre-capitalist" period—roughly, the Middle Ages up to the fifteenth century, the period in which the basis of modern capitalism was developed (and particularly the growth of wealth). In the second volume he draws a careful picture of economic life in the "early capitalist" period, that is to say, the sixteenth and seventeenth centuries. Now comes the third volume, in which "full-blown" capitalism is described both in its theory and practice. In Sombart's opinion the epoch of complete capitalism came to an end suddenly in 1914; what followed is something new, something which is as yet embryonic and cannot be defined.

Even if this thesis does not receive universal acceptance, readers of Sombart's last chapter will agree with him that it is a mistake to imagine that in the future any one economic system will prevail; that, on the contrary, there is great likelihood that capitalism will be found side by side with co-operation, social ownership of the means of production, craftsmanship and old-fashioned farming; that the existing economic organisation of society (the author writes with an eye on Soviet Russia) will not be overthrown by a forcible revolution; and that it is childish to believe that there is a likelihood of a development backwards to the "pre-capitalist" condition of affairs. The elaboration of these views makes interesting reading, and no one should miss this last chapter. Like the rest of the volumes it is thought-provoking; throughout it may be said *le style c'est l'homme.* Despite the years Sombart has not changed. He put these theories before us a quarter of a century ago when we attended his lectures at Breslau; he has elaborated them in his book on the Bourgeois (called "The Quintessence of Capitalism" in its English dress), and in his studies of the Jews and Capitalism, War and Capitalism, and Luxury and Capitalism. The only noticeable difference in the third volume is that the author gives the impression of greater calm and greater deliberation than in those days; the energy is under control, but the result loses nothing in attractiveness.

The method of presenting the subject, step by step, is that which all readers of Sombart will by this time know. The author sets forth his presentation of any point, following up his own remarks by ample quotations from recognised authorities which have a way of taking root in the memory; as, for example (to illustrate by one or two instances in English), Mill's comment on capital: "the distinction between capital and not capital does not lie in the kind of commodity, but in the mind of the owner"; or Andrew Ure's warning that the factory hand must give up his individual liberty: "he must necessarily renounce his old prerogative of stopping when he pleases, because he would thereby throw the whole establishment into disorder"; or Ford's reason for being so many-sided: "when we cannot depend on prompt deliveries . . . we are forced to go into them ourselves."

Sombart is at pains to make clear his attitude to Marx. He confesses that his conception of Capitalism derives from Marx; the difference between them, however, is that Marx wrote of Capitalism when it was just about to emerge into "complete" capitalism, Sombart when "complete" capitalism was unrolled

before him. Marx, as he says (delightfully and unabashed), wrote the first word about Capitalism, he, Sombart, in the work before us, has written the last word. "Then it was morning and the skylark sang; now it is evening and Minerva's owl is about to sally forth."

A bare outline of Sombart's scheme will hardly suffice to convey the thoroughness of his treatment. He begins with the Foundations on which the Economic System rests—human energy, the State (Imperialism) and technical progress. A good chapter here is that on the psychology of the modern capitalist undertaker. Next he considers the structure—capital in its various forms, labour and all that affects it, and demand. In this section the chapter on Towns is to be commended. Lastly, he surveys economic processes—markets, supply and demand, rationalisation (the Open Sesame of so many problems of industry) —and industrial production. No student should miss the chapter in this section on Competition. But the work as a whole will repay close study. It gives the reasoned views of an economist who is at the same time an original thinker and a gifted artist. For the English student it may be said that Sombart's work will not replace Marshall or Nicholson, but it will undoubtedly supplement and illumine what these great teachers have to give. It is pretty safe to prophesy that Sombart's five magnificent volumes will long remain a source of delight and information for economic students by reason of their bibliography, their wonderful power to stimulate thought, and their reflection as in a large-size mirror of the modern Capitalist System in all its aspects.

M. EPSTEIN

The Economic Theory of the Leisure Class. By N. BUKHARIN. (London: Martin Lawrence. 1927. Pp. 220.)

THIS is not, as might be supposed, a book analysing the economic conditions which give rise to the existence of a leisure class. It is an attack upon a particular school of economic theory whose tenets the author regards as coloured by class sympathy with the well-to-do, and especially with that "product of the decline of the bourgeoisie," the *rentier*. For this purpose Professor Böhm-Bawerk is selected as the spokesman of the decadent bourgeoisie, and it is he who, almost unsupported, bears the brunt of M. Bukharin's onslaught. The book consists, in fact, of extracts from Professor Böhm-Bawerk's works illustrating his theory of value and his theory of interest, each followed by a detailed criticism by M. Bukharin.

The author is true, in this monograph, to the Marxian tradition of obscurity, of detestable style and of tedious numerical examples. The following is a good specimen of the style of the book. "Every historically determined form of production relations presents an adequate form of distribution reproducing the given production relations." Perhaps it does; but not many readers will be much the wiser.

A somewhat exhausting study of M. Bukharin's dialectics suggests that the essence of his criticism lies in three propositions. First, the Austrian school, and with it the bourgeoisie generally, predicates laws as having universal validity when in fact they are applicable only to a particular historical society, namely, that which may be called capitalism. Second, the school in attempting to explain value primarily from the standpoint of utility argues in a circle. Third, Böhm-Bawerk is hopelessly muddled about interest.

In his detailed criticisms M. Bukharin appears in nearly every instance to become involved in the logical fallacies of the strict Marxian theory of value. These need hardly be repeated here. He is most nearly successful in some of his criticism of the Austrian theory of interest, where he makes out a good case for disposing of the view that there is always a "technical superiority" in roundabout methods of production. But even here his successful hits appear to be more a matter of luck than of valid reasoning, for his attitude to the theory of interest generally will hardly pass muster. Certainly many socialists will be alarmed to read that "It will be a matter of indifference to a socialist society whether labour is applied to the direct production of articles of consumption or to some more remote purpose, since labour in such a society is performed according to an economic plan drawn up in advance. . . ."

It remains to add that even though M. Bukharin may be wrong it is worth while looking for some of the causes of his wrongness. It is possible for a theory to be logically correct and yet seriously misleading; and the origin of many illogical objections to valid reasoning is to be found in some fault of emphasis or presentation in the latter. Thus it is true that the classical theory of distribution is, correctly stated, of universal validity, and not a mere product of a bourgeois society in a state of class war. But it may fairly be argued that this theory is not equally *significant* in all conditions of society, and that it would be better to make this clear at the outset. A theoretical analysis of the elements of rent, interest, profits, and wages in Crusoe's income

could indeed be made; but there would not be much point in making it. A theory of distribution which divides income into these categories is, after all, only of interest when the categories do ordinarily go into different pockets; that is, in the particular economic society in which we are living, or, as perhaps we should say, have lately lived

Similarly with the criticism of the theory of value. M. Bukharin's point here is that the housewife, having considered the utility to her of the first, second, third and fourth apples respectively, goes into the market to apply her decisions and finds the price of apples fixed. He concludes that in arriving at her demand schedule she has to take into account the very factor that her reasoning was supposed to determine, namely, the price of apples. Anybody who has considered the subject knows that the explanation lies in the difference between the influence on prices of one and of a multitude of housewives. But teaching experience leads one to conclude that the point is a stumbling-block to many who have no Marxian bias. We might with advantage take more pains to clear up the connection between the individual who values the first apple at 6*d*., the next at 4*d*. and so on, and whose calculations are supposed to determine the market price of apples, and the same individual when he goes into the market to buy apples and finds that the market price works out at, say, 2*d*. each, and that he can take it or leave it at that.

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The Green Rising. By W. B. BIZZELL. (New York: The Macmillan Company. 1926. Pp. x + 269. Price 8*s*. 6*d*. net.)

DR. BIZZELL, who is President of the University of Oklahoma, has written a book the nature of which is rather disguised by the title he has chosen. He admits that he has borrowed it from Mr. G. K. Chesterton. In the setting from which it was taken the Green Rising is applied to the revolution by which the peasants of Eastern Europe have secured the land since the war, and therefore it is contrasted with the Red Rising of Russian industrialists. The book, however, touches on this movement in the most perfunctory way. Some sixty pages are devoted to "an historical survey of agrarianism," which ranges from the times of the Old Testament prophets to the land policy of Presi-

dent Calles of Mexico. All this might well have been omitted. The author has nothing new to say; and the fact that he quotes David Hume and John Richard Green in his account of the Peasants' Revolt of 1381 suggests that he hardly knows where to go for his material. It is a pity that he conceived the idea that there is "a thread of continuity running throughout agrarian history." It is, in fact, a tangled skein which Dr. Bizzell does very little to unravel. He does not distinguish clearly enough between the agrarian unrest which may arise from the burden of indebtedness, from the conditions of tenure, and from the real or supposed exploitation of the farmers by transport and industrial interests. There is also a tendency in his treatment of the subject to assume that all revolutions arise from agrarian grievances. And while the general history is too vague and episodic to provide any real interpretation, such details as are given are often inaccurate. The English reader will be surprised to learn that "six Dorsetshire agricultural labourers attempted to form a union . . . were severely condemned and nothing came of their efforts" (p. 46), and unless they remember that Joseph Arch was a local preacher they will wonder why he is described as "a rural minister." The valuable part of the book is the last eight chapters on the history of agrarian movements in the United States; this does not need the historical introduction which the author attempts to provide. So the reader may be recommended to begin at p. 90. He will find in the subsequent chapters much information not easily accessible elsewhere. Dr. Bizzell shows that farmers have been largely responsible for "third party" movements in America. The circumstances in which the Granger movement, the Farmers' Alliance, the Populist Party and the Non-Partisan League sprang up are discussed and the causes of their comparative failure are indicated. It is insisted, however, that, while these protests have not brought a new party into permanent being, they have forced the traditional parties to modify their programmes. Since so much attention is usually paid to industrial development, it is useful to have some account of the farmers' attitude towards transport questions, problems of currency and banking, tariff policy and the trust movement clearly presented. The American farmer is now faced with the difficulties of excess productive capacity, with the consequent danger of getting low prices for his crops and stock. He realises that the tariff, while it may favour special farming interests, such as wool, sugar and vegetable oils, does nothing for the great staple crops, such as cereals and cotton, which necessarily depend on

export. The present policy merely makes the manufactures which the farmer has to buy dear, and restricts the demand for agricultural products abroad. The limitations on immigration also deprive him of cheap labour. He considers that the railways, the banks, the manufacturers and the workmen get legislation in their interest when they require it; so he is beginning to demand legislation which will provide him opportunities equal to those enjoyed by other classes. Dr. Bizzell has some hope for the extension of co-operative selling and apparently would welcome legislative assistance; but if these courses fail he does not anticipate that the "Green Rising" will become a serious menace to society. He seems to agree with the writer, whom he quotes from *The New Republic*, that in politics the farmer retains "a marvellous appetite for stones in lieu of bread."

J. F. REES

Die Probleme der internationalen Sozialpolitik. By PROFESSOR DR. KARL PŘIBRAM. (Leipzig. 1927. Pp. 196.)

Neues Werden in der menschlichen Wirtschaft. By PROFESSOR JULIUS HIRSCH. (Jena. 1927. Pp. 41.)

"WHAT can international action do for social reform?" is the question that Dr. Přibram sets himself to answer. With characteristic German thoroughness he finds it necessary to explain in detail what social reform means, what national efforts can achieve, and how international endeavour has, at different stages, met with the opposition of nationalism, of individualistic liberalism and of revolutionary socialism. It was the Treaty of Versailles which gave to international "Sozialpolitik"—it is unfortunate that there should be no exact English equivalent—a new impulse. Article 13 laid down that universal peace must rest on social justice, and Article 427 that "labour" is not to be regarded as a commodity. Accordingly, Dr. Přibram's third chapter deals with the International Labour Conference and the International Labour Office, with which latter he is intimately acquainted. The value of the Conference must not, in his opinion, be measured by the number and the content of the Resolutions adopted, or even by the Ratifications they may subsequently secure. For apart from achievements of this kind, the proceedings of the Conference have shed light on a host of problems, and the researches of the Labour Office have collected a mass of information of inestimable value.

The first desideratum is an international minimum standard

of wages and conditions of labour, for unless and until such a standard can be fixed, it will remain open to the employers of every country to urge that any concessions made by themselves must necessarily handicap them in the markets of the world. On questions such as the regulation of the labour of women, young persons and children, the prevention of accidents and industrial disease, the general hygiene of factory and workshop, social insurance against sickness or unemployment, etc., etc., there are differences of opinion but no insurmountable obstacles to agreement. But on the question of a minimum wage or a maximum working day the different conditions obtaining in various countries make agreement practically unattainable. It is claimed in the one camp that each country has its optimum productivity, which legislation imposed from the outside might ruthlessly disturb. And in the other, it is contended that the shortening of the working day is everywhere bound to lead to improved processes and organisation, and hence to progress. The important part played by the Trade Unions in the determination of wages and conditions points to the necessity of some international regulation of their activities. Here Dr. Přibram is held up by the obvious difficulty of fitting them into the legal framework of any constitution. Works Councils, though they may play an important part in the industry of the future, and may eventually prove a powerful instrument for industrial peace, are even less ripe for international regulation. The protection of the worker who seeks his livelihood in a foreign country presents a problem which obviously falls within the scope of international action: so far there has been no systematic regulation on the subject, but considerable success has been achieved by mutual agreements between the States concerned.

After an exhaustive survey of the ground, the author finally asks: "What are the prospects for the future?" In the battle for the minimum standard the problem is how to convert the backward States to the acceptance of the standards already in force in the more progressive. Here the internationalists are faced with a cruel dilemma. If they aim at a high standard, they will gain few adherents; if they desire universal agreement, they must keep their requirements modest. But there is a worse difficulty. In the last resort the worker's remuneration must depend on the resources and productivity of his own country, and his *real* wage is therefore not susceptible of international regulation. On the other hand, much can be done by international agreements and understandings on various vital questions.

Banking, *e.g.*, cries for international understanding, and the coal problem will never be solved except by international measures. We shall achieve more by working at these and similar problems in detail than by spending our energies and resources on grandiose schemes of international regulation of wages and hours. The writer is too judicial to make large claims for his "Sozialpolitik," but he is evidently hopeful.

Dr. Hirsch's little pamphlet deals with the general question of productivity and progress, and finds in the blessed word rationalisation a solution of all our problems, and an effective means of laying an ancient ghost. Modern tendencies, he maintains, have not only disproved the theories of Malthus, but are going far to establish the contrary. Population does not increase in geometrical ratio, for the birth-rate steadily declines, while the area required to feed a human being rapidly diminishes. The outstanding progress of the last ten decades is trifling in comparison with what we may still expect of the future. Scientific research, allied with mechanical invention, has made short work of the Law of Diminishing Returns, and Increasing Returns prevail in agriculture as in industry. Germany, for instance, has lost 18 per cent. of her cornland and only 7 per cent. of her population. Yet she imports less food than before the war, and may eventually begin to export it. The fact is that her chemists have carved a "corn province" out of the air. The bogey of the exhausted coalfields recedes ever farther into the distance. America was threatened with the exhaustion of her oil supplies in four years: now she may hope for several hundred years' grace. Only 5 per cent. of our water power has been exploited, and with the winds we have not even made a beginning. As soon as one material fails we substitute another, at first less efficient, then as good, and finally better than its predecessor. Natural forces are pressed more and more into man's service, and his productive powers increase by leaps and bounds.

The difference in the productivity of labour in different countries points a moral which anyone may read. A German work-hour is equal to two Russian hours, but an American hour is worth four German hours. There seems little to be ashamed of, however, in the German industrial organisation, of which the writer draws a glowing picture. Invention, until lately a matter of luck and genius, has become a normal incident of business. Nervous energy triumphs over muscular force, a fact which, combined with the progressive decline of the birth-rate, is responsible for the entry of women into the labour market, and a con-

sequent rise of 33 per cent. in total productive capacity. Real wages have risen and are still rising, and the intensity of the class war diminishes. The "rationaliser" need only have the will to seek, and the intellectual capacity to find the optimum point for every product and every market. But he must be an idealist too. Dr. Hirsch almost carries away his reader on a rising tide of enthusiasm. But we note that though he mentions the shores of the Baltic, he does not, like Malthus, take us to "the confines of China." There is no word of backward races, or of the teeming millions of the East. And only once does Dr. Hirsch allow himself to suggest that there may be limits. Nevertheless, the pamphlet, with its optimism well supported by fact and argument, makes attractive reading.

H. REYNARD

Actieve Handelspolitiek: Feiten en Uitkomsten. By J. E. VLEESCHHOUWER. (The Hague: Martinus Nijhoff. 1927. Pp. xi + 251.)

HOLLAND is at the present moment enjoying an orgy of argument on the old question of Free Trade and Protection; or, to be more precise, they are discussing an "Active Trade Policy," since in these days Protection, for reasons which are not wholly obvious, apparently prefers to masquerade under an alias. On the Free Trade side the controversy has produced in Mr. Vleeschhouwer's work a book which rises markedly above the level which is customary where economic argument becomes popular and acrimonious. Although this volume is published by the Dutch Free Trade Union, and the inquiry was indeed undertaken at their request, it is expressly recorded that Mr. Vleeschhouwer, in embarking on his task, stipulated that he was not to be bound to produce good propaganda for Free Trade. If Mr. Vleeschhouwer, however, had any doubts or reservations before he set his hand to the plough, it is clear that none now remains. Tariff controversy, as he points out, is a peculiarly periodic phenomenon, with as marked a periodicity as the trade cycle, and not indeed unconnected with that old familiar bone of contention. For whereas the out-and-out protectionist advocates his remedies in season and out of season, it is only in a period of depression that there is a general disposition to consider not unfavourably any scheme which will hold out a promise of salvation. It is doubtless a just observation, but the lengthening chain, which stretches from sun-spots at the one end to active trade policies and safeguarding at the other, is surely becoming disconcertingly long.

The first part of Mr. Vleeschhouwer's book is devoted to "facts"; the second to consequences. In the first part there is a survey, of very varying length, of the position in the seven countries to which appeal is most frequently made in the current controversy. Of the position in Great Britain not much is said, and that little largely relates to safeguarding, as commented on by Mr. Hirst. The two chapters of substantial importance are those devoted to Switzerland and the U.S.A. Switzerland is apparently the country which is held up by the active-trade politicians as the good example which Holland ought to follow; but Mr. Vleeschhouwer very properly shows that Switzerland's protectionism is not a recent development; and with reference to condensed milk, cheese and chocolate he shows effectively that Holland has little to regret. One point of interest on which he touches is the wholesale emigration of business from Switzerland. For the last ten years (quoting a Swiss authority) "l'émigration partielle de nos industries se présentait toujours comme un mal nécessaire qui devait tôt ou tard atteindre toutes les branches d'exportation" (p. 26). How far this exodus is a "mal nécessaire" may be doubted; it may be merely part of the process of the internationalisation of all business, and the establishment of branches in other countries might conceivably in certain circumstances be a source of strength and not of weakness to Switzerland, being in effect the investment of capital abroad. Mr. Vleeschhouwer is also of interest in his discussion of the reasons why it is almost impossible for Switzerland (and any similarly situated country of relatively minor importance) to abandon a protectionist policy once it has been adopted.

From the discussion of American conditions two points of some interest may briefly be indicated. Mr. Vleeschhouwer argues against the commonly expounded view that the United States, by virtue of the magnitude of the area involved, should rather be regarded as a large self-contained Free Trade area. It is, however, not merely a question of the goods which pass over the frontier one way or the other; it is also necessary to consider other services and relationships. Indeed Protection, to be consistent, ought to prohibit the investment of capital abroad, and doubtless such an end is the logical outcome of Fichte's "geschlossne Handelsstaat." The other suggestive point is that the infant industry argument, if consistently enforced, should be extended to provide protection against older brothers in the same country. But is this not in effect done when an infant is subsidised?

Mr. Vleeschhouwer has accomplished a very careful and thoughtful piece of work with an admirable balance between theorising and fact. A special word of commendation is due in respect of the footnotes, which in themselves furnish a well-filled (and highly entertaining) armoury for the belligerent Free Trader. Also it is gratifying to note the frequent evidence of the influence of Marshall and other English economists.

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Co-operation in India. By HENRY W. WOLFF. Second Edition. (W. Thacker & Co. 1927. Pp. viii + 298. Price 13*s*. 6*d*.)

WHATEVER the political future of India, there can be no doubt that the welfare and prosperity of the great mass of its inhabitants must depend upon the solution of certain great economic problems. Of these, that of agriculture is the most pressing. The Census for 1921 returns the agricultural population as 72·98 of the whole, while further examination shows that 280,000,000 out of a total population of 319,000,000 live in villages of 5000 and under. Not all these are strictly agricultural; nevertheless it is true that the welfare of this vast population depends directly upon agriculture, while that of the remainder is indirectly determined by it.

It needs no long or close study to know that this great industry is in an extremely backward condition and that the yield from the land is exceedingly small. Nor can there be any doubt that this yield could be greatly increased with more scientific cultivation and a greater expenditure of capital. But here lies the crux of the whole problem. Scientific cultivation means alert educated cultivators who are keen to try and develop new methods: while greater capital expenditure, whether in the form of better instruments and machines, or of fertilisers, is impossible where the mass of the people are hopelessly in debt. The Indian cultivator is neither alert nor educated, and in general shows an astonishing apathy and conservativeness to all change. Yet he is acknowledged to possess great skill and much patience, and is by no means devoid of intelligence. The seeming anomaly is, however, easily explained. New methods mean greater capital expenditure, and such capital must be borrowed at rates which are so onerous as to make a profit impossible, while even increased application of labour and the use of better seeds are of no avail, as any extra surplus resulting therefrom will only go to the money-

lender and leave the cultivator not one pice the richer. The solution of this apparently insoluble problem has been found in the development of co-operative credit and dates from 1904, when the first Co-operative Act was passed. The progress of the movement since that date has been amazing and is continuing at an ever accelerating rate.

Mr. Wolff, who did much to promote the introduction of co-operation into India, has now published a second edition of his book. No one knows more than he about co-operation, and probably no one has a more complete understanding of the co-operative movement in India, so that he has produced a book full of wisdom and constructive criticism. The whole movement, in its varied development, is subjected to a searching examination and is tested in the light of the acknowledged principles of co-operation. The great danger which now confronts the movement is a too rapid growth. The country is vast and the number of educated and intelligent men in the villages few, so that there is a serious dearth of qualified teachers to instruct and help the cultivators when first they form their societies. The officials who guide and control the whole movement cannot possibly cope with this rapid growth alone, and have therefore been compelled in many activities to substitute methods which tend to sacrifice co-operative principles and teaching to mere mechanical efficiency. This weakness is very strongly criticised by the author, who insists that the most important unit in the whole organisation is the village society: that anything which weakens the sense of responsibility of these societies must in the long run destroy the true co-operative spirit. He realises that this spirit is still very feebly developed, but urges that this is the more reason for slow and sound growth. The control by the Central Banks he regards as a necessary evil, to be tolerated only so long as is absolutely necessary. The Guaranteeing Unions as at present developed are also adversely criticised. "The policy based upon 'Guaranteeing Unions' is designed to avoid the trouble (of personal credits as contrasted with credits based upon security of a tangible nature) referred to, by substituting a collective guarantee." He even doubts if the guaranteeing societies will be equal to their guarantees. A very reasonable doubt.

Mortgage credit is discussed, with its difficulties and dangers. Mr. Wolff does not consider that this kind of work should be undertaken by the present societies, but advises that whatever system of mortgage credit may be devised, it should "not (be) allowed to branch over into personal credit. . . ." There are

also chapters on Non-Agricultural Credit and on Grain Banks. Enough has been said, however, to indicate the nature of the book and of the criticisms of the author, who on the whole is satisfied with the progress made.

W. S. THATCHER

De danske Landbrug fremstillet para Grundlag af Forarbejderne til Christian V's Matrikel, 1688. By HENRIK PEDERSEN. (Copenhagen. 1928.)

THIS is a remarkable posthumous volume by a prominent Danish economist and statistician who made it his life's work to study the history of agriculture, and whose deep insight in this subject was appreciated by such authorities as the late Professor Ashley, who had consulted him on several points of Danish history. Unfortunately it is not accompanied by an abstract in English, French or German, which might make the results accessible outside of Scandinavia.

Undoubtedly the public archives in many countries have on their shelves much valuable statistical material which can throw light on social and economic conditions in past centuries. The Scandinavian countries are not behind in their efforts to make these treasures accessible. This will be the case with an interesting Norwegian census of 1662; Iceland had a census 1703, with nominal lists, which are going to be published, and Mr. Pedersen's work gives a picture of Danish Agriculture in the latter part of the seventeenth century, a period in which the old village community was still dominant.

The Matrikel is a complete register of all farms, houses and mills in the rural districts, which was meant to serve as basis for taxation. All arable fields were carefully surveyed and classified, and a somewhat less detailed description of the other lands was worked out. This register was treated by the author, the result being some highly interesting statistical tables from which many important conclusions can be drawn. It was Mr. Pedersen's intention that his work should contain an analysis of the tables, and various valuable papers on the subject show how rich a source of knowledge he had opened. Unfortunately death prevented him from writing this analysis. But even as it is, any reader who will try to master the Danish headings of the tables, after some turning over of the leaves of the dictionary, will find to his satisfaction how much he can learn from this volume about social and economic conditions in Denmark in those remote times.

HARALD WESTERGAARD

Justice and Administrative Law. By W. A. Robson. (London: Macmillan & Co. 1928. Pp. xviii + 346. 12*s.* 6*d.*)

The change which came over public opinion towards the end of the nineteenth century, the abandonment of the presumption against State intervention in economic affairs, the progressive limitation of the rights of the individual, the character and the scope of the legislation which this change has produced—all this is familiar to most of us. Few people, however, realise the influence exerted upon the legal and constitutional framework of Great Britain by the vast extension of State activity witnessed during the last fifty years. The increase in social legislation has been accompanied by an increase in the power of the executive. The functions of the executive are growing at the expense of the other powers of the State. The policy of a Government which runs into intricate details of Housing or Health Insurance cannot be administered adequately, unless wide legislative authority is conferred upon the departments concerned with its execution. Competent observers (*e.g.* Mr. Cecil Carr) have emphasised the growth and the significance of delegated legislation. But the increase in the power of the executive takes another form, and one which has received less attention than it deserves. The extension of State activity has forced the executive more and more to assume judicial functions in the course of its administrative work. There is a demand (so it is alleged) for a technique of adjudication, better fitted to respond to the social requirements of the time than the elaborate and costly system of enforcement by litigation in the Courts of Law. There is a demand for a new type of justice which shall be less like "a system of hands off while individuals assert themselves freely," and more like "a social institution existing for social ends." It is to supply this demand that the various administrative tribunals have been established.

By statute after statute, Government departments have been vested with a power of giving decisions without any appeal to the ordinary Courts. The present tendency is to exclude the Courts of Law from jurisdiction and remove judicial control by making the executive judge in its own cause. The executive is escaping from the "Rule of Law." The following cases—a few selected from many—show how issues have been removed from the cognisance of the Courts and Administrative Law introduced into Great Britain.

Efficient administration of the Housing Acts demands judicial

condemnation of improper houses by those who administer such Acts. Under the Housing Acts the Ministry of Health is made the appellate body in regard to a whole series of important matters closely affecting the rights of owners of slum property and workmen's dwelling-houses. The Minister, in regard to any matter brought before him on appeal, " may make such order in the matter as he thinks equitable," and his decision is then binding and conclusive on all parties. Under the National Health Insurance Act, 1924, if the Minister of Health after inquiry " is satisfied that the continued inclusion in the list of any medical practitioner would be prejudicial to the efficiency of the medical service of insured persons," he may remove his name from the list. Against the decision of the Minister there is no appeal whatever. Moreover, the Minister inflicts monetary penalties " which are not directly authorised by the Act, but which are indistinguishable from ordinary punitive fines." A similar jurisdiction is exercised by the Minister over persons, firms and bodies corporate supplying drugs, medicines and appliances for the use of insured patients. But the judicial powers given to the Minister under Section 107 of the National Health Insurance Act are the most remarkable of all, though space unfortunately forbids their enumeration. The Board of Education exercises wide powers of jurisdiction. It is, for instance, the final authority for deciding almost any question which arises between the Local Education Authority and the managers of the non-provided schools. The Section 3 (3) of the Education Act, 1921, definitely ousts the jurisdiction of the Courts in questions which might be of considerable significance to the public.

Under the Roads Act, 1920, appeals in regard to the granting of licences may be made to the Minister of Transport. He can make whatever order he thinks fit. This order is final and enforceable and is not to be brought up for review before any Court. Under the Electricity (Supply) Act, 1926, the Minister was made the adjudicating authority in regard to a whole series of matters; some of great importance.

By some authorities (notably by Professor Morgan) these inroads upon the preserve of the judiciary are viewed with grave suspicion. The new conceptions of public welfare, however desirable in themselves, seem to involve dangerous constitutional developments. " The executive have overstepped the line which delimits the sphere of the executive and the judiciary." " There is a growing arbitrariness of temper on the part of Government departments which is in flagrant contradiction with

the most elementary principles of justice." "Government officials claim the right to act without regard to legal principles and without appeal to any Court."

To Mr. Robson, on the other hand, the break-away from the "Rule of Law," the emergence of a definite body of Executive Justice is far from unwelcome. The object of his book is to maintain that there is no inherent reason, if due care and foresight are exercised, why Administrative Law should be unfitted to take its place side by side with the Common Law and Equity and Statute Law in the constitutional firmament of the English governmental system. Moreover, the ends accomplished by Administrative Tribunals are socially desirable and compare favourably with the selfish individual claims based on absolute legal rights to which the formal Courts are so often forced to lend an ear. Mr. Robson has produced a most interesting book. The subject, however, is of such importance that it requires an investigator of riper judgment and wider experience than Mr. Robson seems to possess.

J. Lemberger

The University,
Belfast.

The Making of a Chemical. By E. I. Lewis and G. King. (Benn. Pp. 288. 12*s.* 6*d.*)

This is a book for economists and economic students to have and use often as a study in the application of principles. Apart from its technical treatment of production, it has a vivid touch in its exposition of broader economic requirements and conditions, such as the training preparatory to business, the costing of manufacture and sale, and management. The authors both know their subject, and know about it. Few books of this kind are so full of maxims, judgments, and verification tests for the theorist. An industry more specialist than most in its technique thus furnishes a handbook of unusual clearness and interest.

Preparation depends more on the mastery of the simple principles of chemistry than on much knowledge of special chemistry; "all the simple questions are important all the time in every chemical works." The chemist is advised to know pure mathematics, and of course modern languages, but special stress is laid on the accomplishment of "presenting his reports in English rather than in chemistry," of being the master of detail rather than the slave of jargon. There is safety in the liberal education; "the relative importance (to the works chemist) of

the subjects he studies in college and university cannot be foreseen."

The chapters on manufacture and cost include many comments that bear on well-known theoretical points regarding the short price and its share of supplementary costs. That on management is written round the text that "the characteristics of a good manager are those of any gentleman." But also from all over this book, even from some of its many technical chapters, one may collect both the statements and the impressions which show that thoughtful business men and economists are usefully penetrating each other's sphere.

D. H. MACGREGOR

Industrial Combinations and Public Policy. By M. W. WATKINS. (Houghton Mifflin Company. Pp. 331.)

THIS volume is an extremely well-written review of the main aspects of the Trust movement. In his discussion of the economics of the question, the author recognises certain objective conditions which are special to the United States, the general effect of which has been to create conditions of comparative industrial stabilisation, and thereby relatively to limit the scope of pioneer competition; these are the "vanishing of the frontier," the fall of the rate of interest over a long period, and the development of transport. This comparative limitation of new outlets, as a country gets older, turns business initiative into lines of higher organisation. But this implies that subjective motives are fundamental, the objective conditions causing the diversion of profit-making into the new channels. The author amplifies this point of view by an examination of the "alleged economies" of combination, of which he is critical; and by an examination of the "tactical advantages" which it is open to monopolistic power to use. His diagrammatic exposition of competitive and monopolistic price-making in relation to the common welfare is on well-known lines, but is a useful summary for students. In the latter parts of his book he reviews some important industries which have become concentrated, and proceeds to consider public policy. A thorough discussion of alternatives leads him to conclude that it is wisest to develop and strengthen the policy of supervision and publicity as now administered by the Federal Trade Commission. The main limitation is that the discussion is based on American conditions and methods, so that Cartels are outside the author's purview, with all the new phases and problems

which their extension has created. But, on its own ground, it is a helpful and welcome addition to the literature of the subject.

D. H. MACGREGOR

Human Nature in Business. By F. CREEDY, M.I.E.E. (London: Ernest Benn, Ltd. 1927. Pp. 345. Price 12*s*. 6*d*.)

THIS book belongs to that somewhat curious but growing tribe of works on economics written by those who are engineers by profession. It shares with others of its kin a certain discursiveness and a peculiar *naïveté*, thanks to which its author finds out all over again what a number of people have found out and recorded before him. It does, indeed, seem rather odd that at this stage in the world's history Mr. Creedy should have to write a long and somewhat tedious description of the working of the economic system (how goods are passed from manufacturer to wholesaler and thence to retailer, and how they are financed by banker and so on, complete with diagrams) for the express reason that he cannot find that anybody else has already done this satisfactorily. It is strange, too, to read that a "reference to standard economic treatises such as those of Mill and Marshall . . . entirely fails to reveal any discussion of the items known to commercial men as overhead charges" (p. 134). It must have been a very casual reference.

It appears that Mr. Creedy's chief purpose in writing this book is to denounce business secrecy. This is salutary enough; but it would have been more effective if it had been disentangled from pages of rather absurdly general generalisations about the mentality of the "working" classes and of the "middle and upper" classes. In the middle-class home, we are told, the qualities of self-control, mental concentration and forethought are implanted. In the "labouring class" "discipline" is "lax." "The contents of an unskilled labourer's mind are usually confined almost entirely to the knowledge necessary to enable him to carry out his daily routine." "In a somewhat higher grade, the favourite subject for discussion among the men is politics."

Mr. Creedy deals fully in his description of the industrial system with the business of saving and investment and with banking. Sometimes he puts things rather neatly, as when he observes that "if saving is to be possible, the labour of a portion of the community must be sufficient to supply the whole of the community with consumables." But considerable sections

of the book read as if the author had published his notebooks instead of his book (*e.g.* pp. 208, 214). Moreover, Mr. Creedy, though generally reasonable about banks, has one underlying idea which seems to call for more justification than he gives it, *viz.* that "It is *solely* (italics original) . . . the difficulty which the promoter of business enterprise finds in proving his case to the banker and establishing beyond doubt that he can offer Security of Repayment that limits business and checks employment." That many cases are unprovable does not seem to worry Mr. Creedy; for he thinks that unemployment would be abolished if an elaborate Economic Survey and a Central Economic Council were established to investigate all the promoter's ideas and (presumably) to carry them into execution with greater credulity than will their present arbiters, the bankers.

If Mr. Creedy would write a book on publicity in business and that alone it would probably have much greater value than the present volume. He should also on the next occasion avoid quoting long passages from other works without mentioning their titles, or even in some cases their authors.

BARBARA WOOTTON

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Money. By HARTLEY WITHERS. (London: Ernest Benn, Ltd. 1927. Pp. 80. 6*d.*)

Trade. By SIR ERNEST J. P. BENN. (London: Ernest Benn, Ltd. 1927. Pp. 80. 6*d.*)

THE student who sees the word "Money" and the name of Mr. Hartley Withers may be disappointed to find no more than a specimen of Benn's Sixpenny Library, designed to introduce the general reader to some simple economic truths. Mr. Withers begins with an account of what money does, describes the two essential qualities of acceptability and stability, and shows how we have passed from the use of coin to bank-notes and ultimately to cheques and bank credits. He reviews the outworn controversy on Bimetallism, discusses the rise and fall of prices, and finally argues that a gold standard is indispensable. Incidentally he defends the international banker, whom he describes as a "race of very cautious and rather sensitive people with a high sense of what is due to and from their position, and above all conscious of the responsibility involved in it." The fears entertained in some quarters of "sinister financial influence" are treated with gentle and tactful ridicule. It is perhaps hardly necessary to state that

the book is lucid and readable, but it attempts too much in the space at the writer's disposal. The description of the Money Market under the attractive title "From Gold to Gold Paper," and of the foreign Exchanges in the chapter headed "Acceptability Abroad," are insufficiently explicit for the novice, while the business man who is familiar with the practical aspect of the subject is likely to find the treatment inadequate and a little disappointing.

Sir Ernest Benn's *Trade* preaches an all but forgotten gospel of Individualism in simple language and forceful, convincing style. He shows how the intricate and complicated processes of trade are automatic, without conscious organisation, and yet so sensitive that, provided we refrain from tampering with them, they will respond, and respond increasingly, to every human need. It appears to be Adam Smith's "hidden hand" without recourse to any divinity in the background. The explanation lies in the simple fact that the failure to do good work, *i.e.* to supply the public with what it needs, brings its own penalties. According to Sir Ernest, all our present troubles are due to our confusion of trade with politics, and our unnatural attempts to put the producer in a superior position to the consumer. He illustrates our departure from sanity by our railway policy, and predicts that the breakdown of the railways will be the next big industrial crisis. "We must stand in the market-place to be hired, or, alternatively, we must stand in queues at the shop door to be rationed." The treatise ends, however, on a note of cheery optimism, an admonition "to get on with the job." If the economic truths dealt out are a little over-stated, and some of the deductions more than a trifle hasty, there is nevertheless much in the book which the reader can accept with profit.

H. REYNARD

NOTES AND MEMORANDA

The Amalgamation of the British Note Issues[1]

The Chancellor of the Exchequer announced in his Budget statement that the conditions to be proposed for the amalgamation of the Treasury and Bank of England note issues would provide a " greater elasticity " than hitherto. The expectations thus raised are disappointed by the terms of the Bill lately passed into law.

At present the combined fiduciary issues of the two sets of notes is £264,685,000, and, since this total depends only on a Treasury Minute, it is capable of being revised by the Treasury without an alteration of the law. The new Bill reduces the fiduciary total to £260,000,000, and retains, in effect, the provision for increasing this by Treasury Minute, though with limitations on the length of time for which such a Minute can remain in force. The reduction of the fiduciary issue may be compensated by the return of notes from Ireland. But in any case the elasticity of the issue is not increased, as compared with the existing state of affairs. Since there has been so far almost no public discussion to elucidate the principles which ought to govern the gold reserve in modern conditions, it may be opportune to open the debate.

Formerly the gold reserve was held partly to provide for an increase in the number of sovereigns circulating within the country—namely, the " internal drain," and partly to meet fluctuations in the balance of international payments—namely, the " external drain." The Act of 1844 was mainly concerned with the first. It was directed to the obviously desirable purpose of preventing a change in the composition of the internal circulation from having any tendency to change its quantity. Moreover, at a time when most payments were effected by means of notes, an expansion in the note issue was a fairly reliable indicator of an expansion in credit. As time went on, however, cheques gradually superseded notes for most business purposes, and provision against the external drain grew steadily in importance

[1] The greater part of this article was published in *The Times*, May 12, 1928, and is reproduced here by permission of the Editor.

as compared with provision against the internal drain. But up to the War no change was made in the law. Since the War we have finally abandoned the use of sovereigns in circulation, so that the internal drain is now non-existent. Thus both the conditions which the old system was designed to meet have passed away; and it would, therefore, be an extraordinary coincidence if this system were, nevertheless, to need no amendment.

The active note circulation—*i.e.* excluding notes held by the Joint Stock Banks as a part of their reserves—is now exclusively employed for petty cash and for the payment of weekly wages; while the Bank of England's gold reserve is exclusively required to meet the fluctuations in our international account, which depend partly on the balance of trade, but mainly on our huge international banking and investment business. In these changed circumstances it is no longer reasonable to provide that the amount of gold available for the latter purpose should depend on the amount of notes required for the former. For there is very little direct connection between the two.

The right level of bank rate and the right volume of bank credit are highly complex questions which cannot be determined by a rigid formula laid down by Parliament years in advance. Yet a legal formula connecting the gold reserve and the note issue is in fact nothing but a crude and obsolete method of attempting to do this. A loss of gold abroad generally indicates that money rates in London are not quite high enough compared with similar rates elsewhere, or that we are investing in excess of our savings. It very seldom indicates that the internal note issue should be correspondingly curtailed. Nor indeed is it practicable for the Bank of England—since it has no power to reduce wages—to curtail the active circulation appreciably, except by inaugurating a credit policy which deliberately aims at creating unemployment as a first step towards lower wages. Indications that the Bank of England will be well advised to protect its reserves by raising the bank rate or curtailing the volume of credit are to be found, as everyone knows, in a variety of symptoms, of which in modern conditions the volume of the note issue is one of the least important and—what is most serious in an indicator—the latest to develop in point of time. To compel the Bank of England to measure its margin of safety by the volume of the note issue is, therefore, to compel it to pay more attention to a particular symptom than the Bank, left to itself, would deem reasonable, and to do something which to its own untrammelled, judgment seems unwise. In particular, when

employment is reviving and the wages bill increasing, such a provision has the effect of putting pressure on the Bank of England to terminate the reviving prosperity, even though the Bank, left to itself, may see no reason in the world for doing such a thing.

What, then, is the right method, if any, of regulating the amount of the gold reserve? In a sense it is foolish to lock away any of our gold so as to prevent its being used. As a means of providing against a shortage of gold, it is analogous to the famous regulation of a German municipality to provide against a shortage of cabs—namely, that there must always be at least one cab on every rank. Nevertheless, there is much to be said in favour of holding against extreme emergencies an ultimate reserve which is not available for use in any ordinary circumstances. The rational procedure, by whatever rubric one may enforce it, is to divide a country's gold reserves into two parts, one part of prescribed amount being set on one side against extreme emergencies, and the other part, the amount of which would be left to the judgment and the discretion of the Central Bank, being freely available to meet daily needs. That is to say, the law governing the gold reserve could be extremely short, and might run:—"The Gold Reserve of the Bank of England shall not fall below £x."

An alternative way, however, of arriving at the same result is to maintain, in deference to tradition, a formula connecting the gold reserve and the note issue, but to take care that it shall be of such a character as to be inoperative in all ordinary circumstances. Such a provision may even have value as an ultimate check against grave abuses. This is the present position in the United States, where the gold reserves actually held are three or four hundreds of millions sterling above the legal minimum. We could produce the same sort of result here, without appearing to depart too seriously from tradition, by fixing the maximum of the fiduciary issue at a sufficiently high figure.

Our present stocks of gold are about £160,000,000. But this is the favourable season of the year, and a few months ago they were £8,000,000 less. The aggregate note issue varies, at the present level of employment and wages, between £370,000,000 and £380,000,000, according to the season of the year. With a fiduciary issue of £260,000,000, as proposed, and a note issue of £370,000,000, we should have £110,000,000 of gold locked up and £50,000,000 available for use. If the autumn season drew £10,000,000 of gold abroad (which might happen for the most trivial reasons) and the Christmas season drew £10,000,000 more

notes into circulation, we should have £120,000,000 of our gold locked up and £30,000,000 available for use. A combination of reviving trade, good wages, and a holiday season is easily capable of raising the note issue to £400,000,000. In this case, assuming a gold stock of £160,000,000, the Bank of England's reserve would fall to £20,000,000. *Prima facie*, such an arrangement is extremely imprudent—even though there be a possible recourse to a Treasury Minute. Can we suggest a better arrangement?

In the first place, is there really any need to lock away so much as £110,000,000? I suggest that £75,000,000—which is double the total pre-War gold stock of the Bank of England—would be plenty on any reasonable criterion, having regard to the importance for the world at large of economising the amount of immobilised gold. This would leave £85,000,000 in the Bank of England's reserve—a figure which would enable it to face the world with considerable confidence.

In the second place, is it safe for the Bank of England to operate with a reserve of £50,000,000, which it would take very little to reduce to £30,000,000? This amount is surely wholly inadequate for its responsibilities. Since the Bank obviously cannot allow its free reserves to sink to the neighbourhood of zero, these figures mean that it cannot afford in practice to lose even £20,000,000 of gold without considerable anxiety. Yet it is of great importance to industry that the Bank should be free to lose fully this sum, and better if it could lose double this sum, without being necessarily compelled to upset the basis of domestic credit.

We transact a foreign trade (imports and exports together) approaching £2,000,000,000 a year. A fluctuation of 1 per cent. in our imports represents £11,000,000. In addition, London is the centre of a large foreign investment market, having a vast weekly turnover with foreign countries, the magnitude of which it is impossible even to estimate. And further, we are carrying on a gigantic international banking business with liquid foreign balances, withdrawable at short notice, probably exceeding £200,000,000, and very possibly approaching £300,000,000. (We do not even know for certain within a margin of, say, £100,000,000, how large a business it is.) The Bank of France alone is reputed to hold more than £100,000,000 in London. Now a mere breath of wind might diminish these foreign balances by 10 per cent., or, say, £20,000,000; for they have shown themselves capable of increasing by such an amount within a very short period. In short, we are conducting this business on an altogether inadequate

margin, and, even as it is, it has required all the bluff, cajolery and prestige which our authorities can command to get along as well as we have. At any moment, therefore, the expansion of production and of employment will be liable to be interfered with by mainly irrelevant considerations arising out of our international banking business. I do not doubt—let me add—the ability of the Bank of England to protect itself even with the small margin proposed. But I doubt its ability to protect itself without sometimes enforcing a contraction of credit injurious to home industry.

Nevertheless, our total gold reserves of £160,000,000, more than four times the pre-War figure, are very substantial—if only we could use them. Is it not asking for trouble to lock up more than two-thirds of this outside the Bank of England's reserve, and to publish less than one-third as our actually available assets? For this is not a question of how much gold we actually hold—it is solely a question of how much we publish to the world as available at call. It is an odd mentality which seeks simultaneously to enlarge our international business and to diminish both our actual and our ostensible strength to meet its inevitable fluctuations. It is also peculiar to associate any further release of gold with a public declaration of weakness on the part of the Bank of England—which is exactly what in such circumstances one would wish to avoid.

The proposed arrangement means, moreover, that London will be competing with New York for the world's banking business on very unequal terms. Our net annual surplus available for new foreign investment is still very nearly as great as theirs. The international business we do is in some respects greater, and in the holding of foreign balances perhaps one half of theirs. But our free gold reserve is only about one-eighth. It means nothing to them if their international customers take away £20,000,000. Indeed, they did take away approximately that sum last April, and nearly as much last March. Apart from previously earmarked gold, the Federal Reserve Banks have lost some £60,000,000 in recent months without turning a hair. We cannot aspire, indeed, to this degree of strength. But we need not put ourselves under unnecessary handicaps. Foreign banks will assuredly hold their balances in the long run in centres from which they can rely on removing them at short notice without questions asked.

One point of the first importance, which might easily be overlooked, remains for mention. Not the whole of the existing note

issue is in active circulation. A substantial, but unknown, proportion—perhaps nearly £100,000,000—is held by the joint stock banks. Some of this is indispensable till-money; the rest is a part of their reserves, which might just as well be held in the form of deposits at the Bank of England. In the event of stringency arising, it would be easy for the banks, either on their own initiative or at the suggestion of the Bank of England, to pay in, say, £30,000,000 in notes to the credit of their deposits. This would leave the reserves of the joint stock banks unchanged, but would increase the reserves of the Bank of England by the amount paid in. The point illustrates what a farce the proposed Bill may be as a means of regulating our affairs. It removes the real discretion away from the Bank of England to the joint stock banks, who, within wide limits, can make the reserves of the Bank of England what they choose, according as they hold their own reserves in the shape of Bank of England notes or Bank of England deposits. Nevertheless, if the joint stock banks were to take this course, it would not only defeat the objects, if any, of the Bill, but would also partly meet the criticisms made above. Not completely, however. It would still be better if the Bill were simply to read :—" The gold held by the Bank of England shall not be less than £75,000,000 "; or, alternatively, if the fixed fiduciary total were put at not less than £300,000,000.

The debate on the Bill in the House of Commons brought to light another point of some importance which is not obvious at first sight. Sir L. Worthington-Evans pointed out that an amendment proposed by the Labour Party to increase the fiduciary note issue by £15,000,000 would have the effect of reducing the securities held in the Banking Department by £15,000,000 and therefore of reducing the Bank's profits by (say) £600,000.

This is quite correct under the terms of the Bill; though Sir Laming did not point out that the securities in question would be sold, not to the public, but to the Issue Department, with the result that the Treasury would gain an equal sum. For an increase of the fiduciary issue by £15,000,000 would involve a transfer of £15,000,000 in cash from the Issue Department to the Banking Department, and a transfer of £15,000,000 in securities from the Banking Department to the Issue Department. The former transfer would strengthen the Bank's reserve of free gold; but the latter transfer would mean that the Treasury instead of the Bank would receive the interest on the securities. Sir Laming's point could, of course, easily be avoided by limiting the profit of the Treasury to the interest on £260,000,000. But under the

Bill as drafted the Bank has a financial interest in fixing the fiduciary issue as low as possible, because it is the amount of the fiduciary issue which fixes the Treasury's share in the profits of State Banking. We have here, therefore, the first rational explanation yet given of why the Bank desires a level of the fiduciary issue which so greatly weakens the strength of its international position. The larger the Bank's reserves the smaller its profits. The Bank would like to have larger reserves; but it would also like to have larger profits. The present Bill represents the point of equilibrium in the Bank's mind between these conflicting advantages.

Now this discloses a further fault inherent in the present arrangements. It is most desirable that the Bank of England should earn adequate profits; for the Bank ought to be free to pursue the right policy regardless of the effect on its profits. But under the terms of the new Act, to raise the Bank's reserves to a really comfortable figure would, as Sir L. Worthington-Evans justly pointed out, have a serious effect on its profits, and might, if it were effected by increasing the fiduciary issue, raise the Treasury's share to an excessive figure; though at present no one, not even the Chancellor of the Exchequer, has any means of knowing whether the Bank's profits are or are not adequate, since (unlike most other State Banks) the Bank of England's true profits are kept a dead secret.

Is not all this rather absurd? Why should not the Bank of England have both adequate reserves and adequate profits? We have plenty of gold and plenty of profit from the currency. But we have tied ourselves up in such a peculiar way that we can only assign profit to the Bank of England by taking gold away from its reserve and locking it up in the Issue Department where it cannot be used. Thus the whole question requires reconsideration and is eminently a proper subject, as Mr. Snowden argued, for inquiry and report.

The Bank of England has evidently thought that the best way to burke discussion is not to allow the slightest change in outward forms, however obsolete and inconvenient. This is a great mistake. Besides, why should the Bank fear discussion? We do not want to be governed by masked men in false beards muttering Mumbo Jumbo. But every wise reformer knows that the strength, prestige and independence of the Bank of England are the corner-stones of a sound credit system in this country. Adequate profits, adequate reserves, adequate knowledge and adequate freedom from interference by "interests" political or

financial are the necessary conditions of successful management. But the Bank will not, in the long run, increase its prestige or secure its future or avoid suspicion by putting forward a case which will not stand ten minutes' expert cross-examination, whilst its real reasons and motives, however praiseworthy, remain, like its profits and its statistics, secret and unavowed.

The following table, lately compiled by the United States Federal Reserve Board, of the principal gold stocks held by Central Banks and Governments at the end of 1913 and of 1927 respectively, may be useful in guiding our sense of proportions:—

	1913. £ million.	1927. £ million.
United States	265	818
Great Britain	35	153
France	140	146
Japan	13	112
Spain	19	103
Argentine	46	95
Germany	57	91
Italy	59	49
Total for all countries	982	1,891

Thus the general withdrawal of gold from circulation has strengthened the Central Banks of the world about in proportion to the rise of prices and the growth of business. The risk of a future shortage of gold need not, therefore, be acute—unless we ourselves adopt, and encourage others to adopt, the short-sighted policy of locking away too much of it out of use, thus leading to brisk competition between the Central Banks each to secure for itself an adequate margin out of the inadequate total which remains.

J. M. KEYNES

OFFICIAL PAPERS

Municipal Savings Banks. (Cmd. 3014. 1*s*. 3*d*).

THIS is the Report of a Committee appointed in 1926, with Lord Bradbury as Chairman, to consider whether an extension of municipal savings banks is desirable. They were authorised by an Act of 1916, for purposes of war finance, in boroughs of a minimum size, with the guarantee of the rates, under prescribed regulations as to investment. Only in Birmingham was advantage

taken of the Act, and of a subsequent extension by Special Act in 1919, this city having in 1927 a bank with 40 branches, depositors' balances of nearly eight millions, and 226,000 separate accounts.

An interesting part of the present Report is the survey of existing facilities for thrift. When allowance is made for the value of money, total deposit balances in these agencies increased in 1926–7 over 1913–14 by 16 per cent., from 376 to 435 (740) millions, and in addition 500 millions were in Savings Certificates. The distribution between classes of depositors is not accurately known; but the Report concludes that the extent of other agencies is such that a new system of banks would to a very large extent only divert savings. It is estimated that only 25 per cent. of the Birmingham deposits represent new savings, and in that city there is no Trustee Savings Bank.

The Committee is critical of the proposal for extension on the permanent ground of the nature of the banking risks, and on the temporary ground of the conditions of national finance as they may be affected by diversion of Post Office and other funds. As to the first point, since funds would largely be lent to the municipality, the risks of borrowing short and lending long would be specially great, for municipalities cannot give the same final guarantees as the Treasury, while if there is proper liquidity the margin available for municipal finance will not be large. The dependence of a municipal bank on the conditions of perhaps one or two local industries has also to be remembered. The whole credit system might be weakened by the extension of banks with these special liabilities. The second point relates to the problems of the national debt in the next ten years. The rate of interest for everybody, and the public credit, will be unfavourably affected if the Government is forced to borrow resources now continuously available. The Committee is therefore against an immediate extension of municipal banks, and is doubtful, on general grounds, of their utility.

D. H. M.

Customs Regulations and Procedure in Great Britain and Northern Ireland. (Stationery Office, 1927. 1*s*. 6*d*.)

This is an important handbook, including chapters on the Customs Service; the Customs Law; Formalities on Importation and Exportation; Duties, Prohibitions, Drawbacks, Restrictions; the Coasting Trade. It is much more than a technical manual.

Commissioners of Inland Revenue: Seventeenth Report, Year 1926–7. (Cmd. 2989. 2*s.*)

Reports of the Imperial Economic Committee. Eighth Report: Functions and Work of the Imperial Economic Committee. (Cmd. 3018. 6*d.*)

AN outline of the history of the Committee, and of its relations to the Empire Marketing Board; also of the administration of the grant of a million pounds per annum, in fostering the idea of "voluntary preference," by propaganda, publicity, and research.

Overseas Official Publications. Edited by the Librarian, Royal Colonial Institute. Price 5*s.* per annum.

THIS is the only bibliography of official publications in the overseas British Empire, and is issued quarterly, since April 1927.

Estonian Finance and Trade. Published by the Eesti Pank.

A SELECTION of articles from the Economic Bulletin of the Bank of Estonia, published on the occasion of the tenth anniversary of the Republic, and presenting authoritative information regarding the material and cultural progress achieved by Estonia in the first decade of her independent existence.

Soviet Union Yearbook. Third issue; 1927. (Allen and Unwin: 7*s.* 6*d.*)

THE economic development of the Union; with maps and diagrams.

Report on an Inquiry into Middle-class Family Budgets in Bombay City. Prepared by the Labour Office, Secretariat, Bombay. 1*s.* 9*d.*

THIS Report is supplementary to that published in 1923 on an inquiry into working-class budgets in Bombay. It is based on about 1300 budgets, of persons having fixed and ascertainable incomes. The results are tabulated to show, as income increases, a percentage decline in expenditure on food, fuel and lighting,

and rent; a nearly constant percentage in respect of clothing and household necessaries; and a rapid increase in the "miscellaneous" group, containing luxury articles, and provident funds.

Report of the Java Bank. (Weltevreden: 1928.)

On January 24, 1928, the Central Bank of Java celebrated its centenary. The important position which the Bank now occupies in the financial and economic life of the Netherlands East Indies has not been obtained without a struggle.

In the first two decades after its establishment the Bank had to contend with a wholly disorganised currency due to the issue of excessive amounts of copper coins. Moreover, this period was characterised by an unsound credit policy encouraged by inadequate provisions relating to the note issue. Consequently, in 1840 the Bank had to suspend the redemption of its notes.

The Governor-General Rochussen restored order in 1846 by placing the currency system on a sound basis. He created a new paper currency, the so-called "recepissen" (receipts), issued by the Colonial Government, which was established in a fixed relation to the currency unit of the Netherlands, where the silver standard then prevailed. The Colonial Government stated its willingness to give drafts on the Ministry of the Colonies at the Hague, in exchange for these receipts, at a fixed rate, payable ten months after date, in Netherlands currency. This measure has been the first practical application of a (silver) exchange standard policy.

Provisionally, the notes of the Java Bank were made redeemable in these "recepissen"; at the same time a maximum limit for the note circulation was introduced, to be fixed by the Governor-General.

The Colonial Coinage Law of 1854, modelled on the Netherlands Coinage Law of 1847, put the currency system on a silver standard basis; the limping standard on a gold basis, which now prevails, was introduced in the Netherlands in 1875 and in the Netherlands East Indies in 1877.

In 1859 the provisions regarding the issue of notes were altered. Partly the British Bank Act and partly the French Bank Law has been taken as a model. It was stipulated that three-tenths of the notes in circulation and of the liabilities at call had to be covered by legal tender, whilst the maximum limit was to be fixed by the Governor-General. The circulation over and above this limit had to be covered in full. The lack of elasticity

due to these restrictions has more than once proved to be an obstacle to sound discount policy.

It was not before the renewal of the charter in 1875 that a proportional cover system was introduced. In accordance with the new provisions, it was stipulated by the Governor-General that 40 per cent. of the amount of notes in circulation and liabilities at call had to be covered by coins and bullion, whilst no maximum limit was fixed. Since 1914 the ratio of cover has been fixed at 20 per cent.

From about 1906 a remarkable strengthening of the position of the Bank can be traced, to which the favourable development of the Netherlands East Indies has contributed a good deal. In 1908 the powers regarding its foreign bill holdings were enlarged, and from that time the Bank was in a position to pursue a free and effective policy in this respect.

It may be mentioned that from August 1, 1909, until October 20, 1924, the Bank was able to maintain its discount rate unaltered at $3\frac{1}{2}$ per cent.

The Bank has its head office in Batavia and branch offices in the more important towns of the Netherlands East Indies as well as in Amsterdam.

The capital of the Bank amounts since 1925 to fl. 9 million; on December 31, 1927, the gold reserve amounted to about fl. 180 million, and the notes in circulation to about fl. 320 million.

G. W. J. Bruins

OBITUARY

Yves Guyot (1843–1928)

It is very suitable that an English review should do homage to the memory of Yves Guyot, for he really ought to be reckoned almost more as an English economist than as a French one. I doubt if even in England one could find an economist who conformed so completely as he did to the type of the Manchester School. All through his long life he never ceased to wage war on behalf of Free Trade, without allowing himself to be in the least diverted from his path by the temptations of Fair Trade or of Safeguarding or of any other Siren. Often he would cross the Channel to be present at a meeting of the Cobden Club, and he had founded in France a little "ligue du libre échange" on the model of its big English sister.

It was not, however, only in the field of commercial policy that Yves Guyot remained all his long life an intransigent Liberal; he was just the same in all the different fields of social, economic and political life. He had been one of the most ardent protagonists in the celebrated Dreyfus affair, 1897–1900. He was one of the founders of the "Ligue des Droits de l'Homme" at about the same date. He fought against every form of State intervention, such as compulsory vaccination, the regulation of prostitution, the prohibition of alcohol, the limitation in the number of drinking houses, the closing of gambling places, penalties against the adulteration of foods or against speculation. He was the foremost lieutenant of Josephine Butler in her heroic campaign in France, and even paid by six months in prison for the violence of his attacks against the Paris police.

The arguments which interventionists are wont to advance did not move him in the least, even when they were in support of morals. Yes, indeed! Rather drunkenness, prostitution, ruin under the régime of liberty, than temperance, virtue, sobriety, respectability under the régime of State regulation. As for morals, he would not admit that they could exist except as the natural product of liberty.

La morale de la Concurrence was the title he gave to one of his books, which, though the smallest of all those which he published, was, in my opinion, his *chef d'œuvre.* The verve of this little pamphlet reminds one of Bastiat. Nowhere else can one find the optimism of the Liberal School affirmed with a more diverting assurance, exaggeration, one might even say sometimes—cynicism. Thus he would demonstrate that under the pressure of competition every producer and every merchant exerts himself to find out how he can best serve the desires and interests of his fellows, so that one can literally say that he lives only for others—which is obviously the higher Moral Law, the Golden Rule. What philosophy, what religion, he would say, what catechism is there which can pretend to utilise such agents to promote the public interest? Competition, and competition alone, could succeed in driving out from the heart of man the most tenacious of all his evil affections, envy. And how? Because every producer knows that the only thing which can make his own fortune is the wealth of his customers. Nor must one suppose that there was ever the slightest hint of a smile in anything which appeared from the pen of Yves Guyot. He was always altogether serious in anything he said.

This doctrine of *laissez-faire* seemed to him so complete that he

never experienced the need of looking for anything else. It was for this reason that his books, of which there are a great number, are all practically the same book. He had one favourite maxim, to which he would constantly return:—Progress is in direct ratio to the power of man over things, and in inverse ratio to the power of man over men. But he seems never to have noticed—luckily for him, for this kinship would have filled him with horror—that this formula is very much like that of Marxist Collectivism, which holds that the State ought to take over the administration of property so as to release it from the power of individual men.

Yves Guyot's contribution to science was, then, no more than the continuation of the French School represented by Jean Baptiste Say, Bastiat and Gustave de Molinari (who was, indeed, Belgian by birth, but spent his whole life in Paris); and it was to Molinari that Yves Guyot succeeded as editor of the *Journal des Economistes*, the oldest of all the reviews of Political Economy in either hemisphere, for it was founded in 1842 and will soon be able to celebrate its centenary. He was, naturally, a member of the "Société d'Économie politique" of Paris since 1881, and its President to the day of his death. But he was never a member of the *Institut* ("Academie des Sciences morales et politiques"), and was never present at its meetings, which was somewhat remarkable for a French economist. Nevertheless, he would have found at the Academy sympathetic reception for his economic doctrines, though probably in a more moderate form, but less sympathy for his political programme.

Yves Guyot, indeed, never possessed the temperament of an academician nor that of a scholar. He began his career in 1868–9 with journalism and politics. He was editor of a journal of some importance at that time, *Le Siècle*. In 1874 he was elected a member of the Municipal Council of Paris; in 1885 as a Deputy to the Chamber; in 1889 Minister of Public Works, an office which he held for three years up till 1892, when he abandoned politics and devoted all his energy, which never waned even to the last moments of his life, to the many campaigns which we have briefly indicated above. He was, indeed, far too jealous of his independence to bind himself to the servitudes of political life.

In short, his life was admirable for its uprightness, its disinterestedness, its indifference to popularity. Undoubtedly, he often had the feeling of walking a solitary road which almost no one else followed; but this bitter thought, which might have made others hesitate or retreat, never caused him to deviate an

inch from what he believed to be the right path. For our part, whilst choosing a path in quite the opposite direction, we have never been backward in acknowledging our lively sympathy for that fine valour of his, and we appreciate the opportunity to express it once more now that he is dead.

CHARLES GIDE

CURRENT TOPICS

THE Annual Meeting of the Society was held on May 17 at 9 Adelphi Terrace, London, when the accounts were passed and the Auditor's Report was received. Professor Pigou was elected a Vice-President and Professor Rees was elected a member of the Council to fill the vacancy thus created; the other officers of the Society and members of the Council being re-elected as before.

THE following have been admitted to membership of the Royal Economic Society:—

Adair, Miss B. M.
Addison, B.
Alhassid, M. C.
Ali, S. M.
Anderson, M. V.
Ansted, H. B.
Armstrong, J. E.
Arndt, Prof. Dr. P.
Bajan, C. B.
Barnes, H.
Barnett, F. O.
Bennett, J. H.
Bernstein, A. R.
Bhan, Prof. R. K.
Bhandari, P.
Bharucha, D. M.
Blundell, H.
Bolt, H. W.
Boss, J. L.
Boucher, C. E.
Brook, R. E.
Brownlie, M. A.
Bryce, C. C.
Cadbury, G. W.
Carter, J.
Cassels, J.
Chanda, H.
Chapman-Mortimer, T.
Charles, D. J.
Charles, W. H.
Clarke, F.
Cohen, J. L.
Cooke, C. A.
Cooper, N.
Cornelius, Rev. Dr. W. J. J.
Cox, E.
Crawford, T.
Crome, R.
Crowther, G.
Crumpton, A. H.
Dameron, W. R.
Daniel, C. R.
Darwent, A.
Davidson, J. M.
Davies, W. H.
Dawson, G. W.
Dearnley, I. H.
Delmonte, J.
Dodd, J. S.
Downs, J. W.
Drake, W. J.
Duncan, G. A.
Dyer, E. F.
Dykes, G. M.
Eakins, G. C.
Easton, L.
Elliston, H. B.
Elworthy, E. G. D.
Faidi, H.
Fawcett, R. J
Fielding, G. B.
Fleming, H.
Fulcher, G.
Gaitskell, H. T. N.
Ghosh, Prof. H.
Gibson, E. C.
Gillies, J. F.
Gluckstein, S.
Graham, P. C.
Green, L.

Gregory, E. W.
Gupta, Prof. A. K. Das.
Gupta, D. C.
Gupta, H. C.
Haller, C. T.
Haldane, G. R.
Hamer-Harries, J. A.
Hardman, H.
Harper, W. P.
Harris, Sir Charles
Haase, E.
Hendrix, E. L.
Hennessy, J.
Hildrew, K. H.
Hughes, H. G.
Hugh-Jones, E. M.
Hunter, J.
Hunter, R.
Innes, T. R.
Jack, J. S. M.
Jackson, W. A.
Jahina, B. J. S.
John, W. R.
Jones, C. R. L.
Jones, L.
Jones, R. O.
Keating, M.
Kelf-Cohen, R.
Kellett, F. M.
Kellock, J. D. G.
Kenyon, F.
Khan, M. A.
Khanna, B. M.
Knott, H.
Lambert, E. A.
Lawe, F. W.
Lawrence, A.
Lee, G. G.
Lemkovitch, H.
Lenègre, W. A. L.
Leslie, G. W. O.
Lindsay-Fynn, B. M.
McAlpin, D.
McFadyean, Sir A.
Mainwood, H.
Majumdar, D. L.
Makin, J. L.
Marshall, Miss D.
Marshall, H. W.
Marvin, J. D.
Mathur, N. P.
Maud, F. H.
Mez, Dr. J. R.
Millis, L. W. F.
Miranda, A. de
Mitra, Prof. J. P.
Moorhouse, R.
Morrison, D. H.
Mortlock, D. W.
Murch, W. J.
Nalle, S. G.
Needham, C. J.
Needham, Sir C. T.
Nomura, K.
Norman, R. L.
O'Neill, J.
Parmar, Y. S.
Parthasarathy, N.
Payne, S.
Pearson, F.
Penrose, E. F.
Phaup, R.
Ping-iu, Wong.
Potter, S. R.
Price, H.
Price, T. W.
Procter, L.
Quinton, C. J.
Rafay, A.
Ralphs, F. S.
Ranga, Prof. N. G.
Rankin, Miss M. T.
Rao, K. S.
Rawlinson, A. W.
Rees, Prof. J. F.
Rees, V. R.
Reynolds, R. C.
Rhodes, W.
Richardson, H. E.
Rignall, G. H.
Riley, G. S.
Roberts, R. W.
Rogers, S.
Rosenwald, W.
Rottlenthner, E. H.
Salin, Prof. E.
Saunders, R.
Schaefer, Dr. T.
Schlee, R.
Schmitz, J.
Scott, G. F. E.
Seth, M. N.
Settin, A. R.
Shadain, N. R.
Sharp, G. M.
Shorrock, P.
Simon, W. D.
Simons, P. F.
Singer, P.
Slark, L. W.
Slight, J. C.
Smith, P. E.
Spafford-Jones, G. W.
Speak, H.
Stanford, W. H.
Stevenson, W. O.
Sundy, C. A.
Taylor, H.
Taylor, H. H.
Terry, R.
Thadani, N. R.
Thomas, E.
Thomas, J.
Thomson, Miss I.
Tillotson, A.
Ting, V. K.
Traill, R.

Trevor, T. H.
Trusson, H.
Udyawer, L. M.
Utley, Miss F.
Vickers, L. M.
Virgo, S. J. E.
Walsh, J. P.
Welingkar, J. N.
Whitlam, A. G.

The following have compounded for life membership of the Society:—

Alexander, Miss E. H.
Cadbury, G. W.
Clarke, F.
Gowin, E. B.
Hugh-Jones, E. M.
Legge, K. H.
McKenzie, A. W.
Mason, E. S.
Nurullah, M.
Pendrill, W. G.
Rankin, Miss M. T.
Roberts, F.
Salin, Prof. E.
Sargant-Florence, P. S.
Schlee, R.
Shields, Prof. B. F.
Ting, V. K.

The following have been admitted to library membership:—

Banque de France, Paris.
Bibliothek der Hochschule für Welthandel, Vienna.
California State Library.
Canterbury Agricultural College, New Zealand.
Chicago Public Library.
Cincinnati Public Library.
Consiglio Provinciale Dell' Economia di Milano.
Gladstone Library, National Liberal Club.
Glasgow University Library.
Gulson Central Library, Coventry.
Hailey College of Commerce, Lahore.
Hamilton College Library, New York.
Haverford College Library.
Institute of Cost and Works Accountants.
Lake Forest College Library, Illinois.
Law School of Harvard University.
Lawrence College, Appleton, U.S.A.
League of Nations Library, Geneva.
Library of South Australia, Adelaide.
Los Angeles Public Library.
Louisiana State University, New Hill Memorial Library.
Metropolitan Library, Peking.
Miami University Library, Oxford, Ohio.
Mills College Library, California.
Newberry Library, Chicago.
New York Public Library.

Philadelphia Free Library.
Philippine Library and Museum, Manila.
Rochester University Library, New York.
Seattle Public Library.
Seminar of Political Economy, Cracow, Poland.
Smith College, Library, Northampton, Mass.
The State Library, Estonia.
The University, Manchester.
Universitats Bibliotheque, Basel.
University of New Hampshire.
University of Redlands Library, California.
University of Washington Library.
University Library, Edgbaston.
Victoria Public Library.
Weltkriegsbücherei, Stuttgart.
Wesleyan University Library, Connecticut.

We record with regret the deaths of the following members of the Society :—

Dale, B	(elected 1905)
Field, Prof. J. A.	(,, 1925)
Ghosh, D. N.	(,, 1911)
Gleave, S.	(,, 1923)
Hirst, T. J.	(,, 1890)
Jenkinson, A. J.	(,, 1924)
McDonnell, W. D.	(,, 1890)
Robins, K. Nott	(,, 1920)
Steele, F. E.	(,, 1925)

Professor Copland (University of Melbourne) writes :

"The Australasian Association for the Advancement of Science held its nineteenth meeting at Hobart from January 16th to 21st. The proceedings of Section G (Economics and Statistics) may be of interest to economists abroad, as illustrating the increasing importance of economic study in Australia and New Zealand. Discussions centred round the general problem of the Marketing of Primary Products, upon which a number of important papers had been prepared by academic economists or authorities with practical experience of marketing. In addition, official statements were forwarded from the Federal and State Governments concerning their marketing legislation and policy. The topics dealt with covered 'The Theory of Marketing' by Professor D. B.

Copland; reviews of Bawra and of the Gold Producers' Association, both by Mr. E. C. Dyason; papers on wheat marketing and wheat pools by Messrs. G. L. Wood, C. W. Harpur and J. Thompson; 'The Marketing of Base Metals' by Sir Lennon Raws; 'An Australian Wool Futures Market' by Mr. H. E. Teare; 'The Australian Export Trade' by Mr. E. T. McPhee; 'South Australian Marketing' by Mr. A. L. G. MacKay. During the discussions Mr. L. F. Giblin developed an interesting point of view concerning 'the cost of protecting Australian exports' as exemplified in the special conditions relating to the sugar, butter and dried fruits industries. All the papers on marketing are to be published shortly by the Economic Society in a special supplement of the *Economic Record.* The Section also had before it three other important papers. The president (Professor R. C. Mills) chose for his address 'The Financial Relations of the States and the Commonwealth,' in which he argued for the retention of the Commonwealth income tax as the basis of any scheme for adjusting these relations, a point of view characterised by the Prime Minister as being economically unsound. This point was not raised in discussion by any member of the Section, though the leading economists of Australia and New Zealand were present! Dealing with the incidence of infantile mortality before a joint meeting of the Economic and Public Health Sections, Mr. Malcolm Fraser, Government Statistician of New Zealand, showed that the great improvement in the infantile death-rate in New Zealand had occurred after the first month of life. Finally, a criticism of the economic effects of the Arbitration Court in New Zealand by Professor Tocker created a keen discussion.

" Immediately prior to the meeting there had been a conference of the Statisticians of Australia and New Zealand, and as the Statisticians stayed on to attend the discussions of the Section, there was a representative gathering of economic authorities. During the week a meeting of the Council of the Economic Society of Australia and New Zealand was held. Mr. C. H. Wickens, Commonwealth Statistician and Actuary, was elected President of the Society, and Professor A. H. Tocker was added to the Editorial Board in place of Dr. Condliffe, who resigned on his appointment to the Institute of Pacific Relations at Honolulu. The executive was able to present a very satisfactory report on the activities of the Society. There are now over 800 members in the ten branches and the *Economic Record* continues to expand its circulation. Considerable discussion centred round a recommendation of the executive to the Commonwealth Government,

that an Economic Research Bureau be established under the auspices of the Council for Scientific and Industrial Research. It was decided to recommend an independent bureau as a first alternative. An interesting discussion took place among the academic teachers of Economics concerning the initiation of a Diploma of Public Administration, the provision for the study of marketing, and the relations of studies in Economics and Commerce, a problem that will arise in Melbourne shortly when an appointment is made to the new Chair of Economics."

OUR Dutch correspondent writes as follows :—

"The Bill for the taxation of Dutch nationals not residing in Holland, which was mentioned in the ECONOMIC JOURNAL for March 1928, was rejected by the Second Chamber in so far as the income tax was concerned. That portion of the Bill dealing with succession duties was thereupon presented as a separate Bill, and passed by the Second Chamber after amendment of an Article which in the opinion of the Second Chamber would have given too much power to the Government."

"The report has been published of the State Commission appointed in November 1926 to examine the possibility and desirability of simplifying the administration of the State funds established in connection with the social insurance and pensions of State officials, by investing the amounts in current account with the Treasury or, to a greater extent than hitherto, in Public Debt. The importance of these funds is considerable; the capital amounts already to 600 million guilders and the annual new investment, including reinvestments, to 150 millions. The Commission proposes to authorise the Government to use the annual contributions to be made by the State to the Invalidity and Pensions Funds—which amount to 60 million guilders—during the years 1928 to 1937 inclusive, wholly or partially for capital purposes, thus reducing the amount which otherwise would have to be borrowed by the State. The payments of the private contributors are to be invested in the securities hitherto allowed and further—to an amount not exceeding 10 per cent. of the funds—loaned to private parties against securities assigned as guarantee. The 6 per cent. State Loan 1923 B was liquidated on April 1, 1928; the funds required for this purpose being obtained by means of a $4\frac{1}{2}$ per cent. Conversion Loan of 84 million guilders, which was entirely supplied by the above-mentioned State funds."

RECENT PERIODICALS AND NEW BOOKS

Journal of the Royal Statistical Society.

Vol. XCI. Part I. *Official Crop Estimates in England.* H. D. VIGOR. A discussion of methods of forecasting, with special reference to the previous articles of Mr. Venn. The conclusion is against the view that there has been a tendency to uniformity in the Reports, or that yields have in recent years been biassed and unduly depressed. *On Certain Aspects of the Distribution of Income in the United Kingdom in 1913 and 1924.* L. R. CONNOR. By a variation in the method of percentiles, " equivalent " incomes are compared for 1913 and 1924, before and after allowance has been made for taxation and transference (debt taxation and pensions). A charge in distribution is shown, the higher incomes not having kept pace with the rise in prices and the increased earnings of the working classes. *Graunt and Petty.* A review article by M. GREENWOOD.

Economica (London School of Economics).

MARCH, 1928. *English Political Economy.* A. A. YOUNG. *The Industrial Court.* SIR H. MORRIS. *The Theory of Population.* . H. DALTON. A critical discussion of the " optimum " population and its criteria, with reference to recent contributions. *Great Cities and their Economic Problems.* E. W. SHANAHAN. *Sir Henry Maine.* K. B. SMELLIE. *Mr. Robertson's Views on Banking Policy.* M. TAPPAN.

History.

JANUARY, 1928. *Some Aspects of English Finance in the Fourteenth Century.* A. STEEL.

Quarterly Journal of Economics (Harvard).

FEBRUARY, 1928. *Supply Curves and Maximum Satisfaction.* R. S. MERIAM. An examination of four problems of long-run equilibrium. The " particular expenses curve " is preferred to the schedule of average cost under conditions of decreasing cost. A critical examination is made of Prof. Knight's argument that all commodities show increasing cost. The possibility of increasing cost and consumer's surplus are argued in reference to recent papers, and lead to a discussion of the effect on surplus of State policy by way of taxes and subsidies. *Statistical Analysis and the "Laws" of Price.* M. EZEKIEL. An analysis of the qualifications necessary in defining the " demand curve " on the basis of successive statistics; with reference to elimination of trend, of quantities withheld by producers, of place and time variations, and of the lag in the relation of supplies to prices *Fourier and Anarchism.* E. S. MASON. *The Currency System of the Irish*

Free State. G. A. DUNCAN. *The German Unemployment Insurance Act of* 1927. F. WUNDERLICH. *The Forty-four Hours Case in Australia,* 1926–27. O. DE R. FOENANDER.

Journal of Political Economy (Chicago).

FEBRUARY, 1928. *Education for Business in Great Britain.* J. G. SMITH. An exhaustive account of the curricula of commercial schools and university courses of study as preparatory to business. "The general circumstances under which higher training for business in England has to be conducted discourage specialisation of the kind that is common in the American graduate schools of business administration." *The Railway Labor Act of* 1926. A. R. ELLINGWOOD. *Recent Developments of the General Sales Tax.* A. G. BUCHLER. *Rate-making and Excess Income.* G. G. TURRELL. *The Canadian Industrial Disputes Act.* C. E. DANKERT. *Taxing Rental versus Taxing Salable Value.* H. G. BROWN.

American Economic Review.

MARCH, 1928. *Ideals and Idealism in Taxation.* T. S. ADAMS. The dominant factor in the evolution of taxes is the contest of interests; ideals are effective only when they serve interests. Hence there can be no pure science of taxation. The number of interests is, however, so great that all legislators must be impartial in respect of many of them. *From Capital Levy to Surtax.* A. COMSTOCK. An outline of the public discussion in Britain since 1919. *The Supreme Court and Compulsory Arbitration.* E. BERMAN. A discussion of the constitutionality of compulsory arbitration in America, as affected by a decision regarding the Kansas Industrial Court Act of 1920. *State Taxes on Savings Deposits in New England.* K. M. WILLIAMSON. *Economic Terminology.* C. WARBURTON. *Psychic Income.* G. W. TERBORGH. A criticism of the validity of the concepts of total utility and consumer's surplus, if measured by differential increments; since the components of psychic income are not related to each other as fractional parts of a sum, but as elements of an organic complex.

Political Science Quarterly.

MARCH, 1928. *Tendencies in State and Local Finance, and their Relation to State and Local Functions.* M. NEWCOMER. A study of the problem of subventions and control, relating to American conditions, but of much general interest.

Wheat Studies of the Food Research Institute (Stamford, California).

FEBRUARY, 1928. *Disposition of American wheat since 1896 with special reference to changes in year-end stocks.* Total production of wheat in the United States, plus imports, varies greatly from year to year. The surplus from a large crop is absorbed by increased consumption only to a negligible extent; on the average, about half of such a surplus is exported and half absorbed in increases in stocks. Thus wheat storage plays a most important part in reducing effects of variation in the size of the wheat crop.

Revue d'Economie Politique (Paris).

JANUARY–FEBRUARY, 1928. *La loi du 7 août 1926, et son rôle dans l'assainissement financier de la France.* X. *L'indemnisation des réfugiés grecs.* E. J. TSOUDEROS. *La stabilisation de la monnaie en Pologne.* R. PLEVEN. *L'état actuel de l'économie et de la statistique agricoles en Russie.* A. TCHAYANOFF. *La politique italienne en matière de taxation des capitaux.* P. NESTEROFF.

Journal des Economistes (Paris).

FEBRUARY, 1928. *Franc-papier ou Belge.* L. HAYOIS. *Les chemins de fer et la production agricole.* G. de NOUVION.

MARCH, 1928. *Yves-Guyot, 1843–1928.* L. FIAUX. *La principe de la prérogative et les chemins de fer.* YVES-GUYOT. *Le rôle monétaire des crédits bancaires.* P. CAUBONE.

APRIL, 1928. *La première bataille du franc* (1924). G. LACHAPELLE.

Vierteljahrshefte zur Konjunkturforschung (Berlin).

2 Jahrgang, Ergänzungsheft 3. *Der Produktivgüterverkehr als Konjunkturmasstab. Der Postverkehr im Konjunkturverlauf der Vorkriegszeit. Untersuchungen über die Einkommensschwankungen in der Vorkriegszeit.*

Sonderheft 6. *Die Saisonschwankungen als Problem der Konjunkturforschung.* O. DONNER.

2 Jahrgang, Heft 4. At the end of February, 1928, the point of maximum activity, reached in November, had been passed, and there were signs of a conjunctural decline.

Zeitschrift für die gesamte Staatswissenschaft (Tübingen).

NOVEMBER, 1927. *Österreichs Verfassungsentwicklung.* L. WITTMAYER. *Probleme der modernen Notenbankpolitik.* DR. KERSCHAGL makes an important, closely-reasoned examination of the problems confronting modern European note-issuing banks resulting from the currency stabilisations of recent years. The reactions of the different methods of stabilisation on the banks are exhaustively set out. Denmark in particular suffered from too high a stabilisation rate, but in England there was a clear case for deflation. Attention is also given to the practical difficulties of price stabilisation; and it is argued that existing economic literature is deficient in real solutions. Movements of central bank rates are defective as an adequate device. *Neuere Literatur über H. H. Gossen.* R. LIEFMANN. *Die Vollgruppe.* H. L. STOLTENBERG. *Die Britischen Staatseinnahmen.* F. HEYER. *Die Organisation der Gewerkschaften in Sowjetrussland.* DR. TIMASCHEW shows that Russian trade unions are dominated by Communistic ideas, and are essentially a part of the organisation of Communism. Starting from a condition of virtually no freedom for individual workers (except that membership of unions is not compulsory), the organisation is by stages up to the general assemblies. But the difficulties of craft and industrial unionism, and vertical and horizontal grouping, have not been overcome. Moreover, the unionist is still subject to legal jurisdiction in respect of conduct. Yet the Russian system has been extensively copied in Italy.

MARCH, 1928. *Statik und Dynamik als Grundprobleme der theoretischen Nationalökonomie.* E. H. VOGEL. A defence of the dynamic basis of theory. *Unternehmergewinn und Arbeitslohn.* B. MOLL. A critique of the theory of profit with special reference to the theory of exploitation. *Kartelle und Konzerne.* S. TSCHIERSCHKY. The author expects an opposition between the aggressive great organisations of the Concerns and the defensive combinations of syndicated Cartels. *Zur Theorie des Finanzausgleichs.* F. BURKHARDT. A statistical investigation of the distribution of the financial burden between the Empire, the Districts, and the Communities. *Geld und Staat.* K. GISLER. An analysis of Gerber's recent volume. *Zur Frage der Steuerwirkungen.* W. LOTZ.

Jahrbücher für Nationalökonomie und Statistik (Jena).

JANUARY, 1928. *Ertragstheorie und Verteilungstheorie.* W. WEDDIGEN. Refers to a book which endeavours to set up a Theory of Returns as part of economic theory relating to Distribution. The essence of the theory is to examine human activity in its task of constantly seeking to obtain the "means" of production; although this includes the distribution of commodities. The article attempts to show the basic connection between the Theory of Returns and the existing Theory of Distribution. *Ueber ländliche Siedlung.* C. DIETZE. *Ueber einige Nebenfragen des Bevölkerungswesens.* H. V. SCHULLERN-SCHRATTENHOFEN. *Die Sozialpolitischen Lehren des Konflikts in der Grosseisenindustrie.* DR. G. ALBRECHT contributes a descriptive article relating to the conflict in the north-west German iron industry in December, 1927. The burning question was the demand of the unions for the eight-hour day at the rates of wages paid for the ten-hour day, to which resort had been made previously. No important conclusions are drawn. *Bemerkungen zu Lampes "Notstandsarbeiten oder Lohnabbau."* ROEMMICH-WAGNER. *Ergebnisse aus den Jahresberichten der Gewerbeaufsichtsbeamten für das Jahr* 1926. I. FEICK. *Die Herkunft der Bevölkerung Kanadas.* H. FEHLINGER.

FEBRUARY, 1928. *Die Wirtschaftstheorie bei Sombart.* T. SURENYI-UNGER. *Wandlungen in Wesen und Aufgaben der Sozialpolitik.* G. ALBRECHT. *Bemerkungen zur Theorie der Steuersystematik.* F. GUTMANN. *Ueber einige Nebenfragen der Bevölkerungswesens* (Schluss). H. V. SCHULLERN-SCHRATTENHOFEN.

MARCH, 1928. *Die Theorie des volkswirtschaftlichen Entwicklungsprozess und ihre Fortbildung durch eine evolutionäre Konjunkturtheorie.* E. H. VOGEL.

Archiv für Sozialwissenschaft und Sozialpolitik (Tübingen).

SEPTEMBER, 1927. *Der Begriff des Politischen.* C. SCHMITT. *Europa in Afrika.* A. M. BARTHOLDY. *Die geistesgeschichtlichen Grundlagen der angloamerikanischen Weltsuprematie: II. Die Wurzel der Demokratie.* G. VON SCHULZE-GAEVERNITZ. *Ein Matz der Konzentration bei pekuniären Verteilungen.* E. J. GUMBEL. A mathematical study. *Die Wirksamkeit der Mindestlohnausschüsse in Grossbritannien.* H. FEHLINGER. An outline of the working of Minimum Wage legislation in this country, with a detailed analysis of the post-war developments. The disparity between

men's and women's wages is stressed. *Gesellschaft und Staat: Studie zu der Methodologie Fritz Sanders.* DR. OPPENHEIMER makes a spirited reply to Sanders' article criticising his recent work on Sociology. *Erwiderung auf Franz Oppenheimer's "Studie."* PROF. SANDERS upholds his criticisms.

DECEMBER, 1927. *Industrielle Schwankungen. Bankkredite und Warenpreise.* PROF. BOUNIATIAN makes a long detailed criticism of Prof. Pigou's recent work on *Industrial Fluctuations.* He argues that the conclusions are but compromises. The method used in Part One is severely limited by complications of actual economic life, and the statistical material is inadequate. No mention is made of over-production as a cause. It is argued that harvest causes have greater importance than is assigned to them. Chief criticism refers to Pigou's acceptance of the "Circulation" theory, which Bouniatian affirms was finally overthrown in Tooke's *History of Prices.* Again, the cheque system has no necessary connection with periodical fluctuations, since these are pronounced where that system is least strong. Initial cause of fluctuations is in price movements, and analysis of these must be starting-point. *Die Agrarproblem der Vereinigten Staaten.* W. RÖPKE. *Zur Problemstellung der Zinstheorie.* F. A. v. HAYEK. *Zur Frage der Bestimmung und Messung der Intensität der Landwirtschaft.* G. A. STUDENSKY. *Leistungsbeziehung und Personenbeziehung.* F. DARMSTAEDTER. *Verbrechertum in Schleswig-Holstein.* F. TÖNNIES.

Schmoller's Jahrbuch (Munich and Leipzig).

DECEMBER, 1927. *Reine und historische Dynamik des Standorts der Erzeugungszweige.* H. RITSCHL. *Die Kausalität der Volkswirtschaft.* DR. ZWIEDINECK-SÜDENHORST writes a descriptive review of Dr. Lamprecht's recent work on Economic Causality, and agrees that the reaction from Weber's doctrines is justified, since the new method "permits extraordinary faithfulness to reality, with complete and thorough uniformity in systematic connection, and extends the theory to immediate practical application." Dr. Lamprecht makes Causality the central feature of Economics, and stresses the importance of psychological methods. For this reason the economic man and the marginal utility doctrine must be discarded. *Volkswirtschaftslehre als Organon.* H. HONEGGER. *Schiffahrtabgaben und Schleppmonopol als Voraussetzungen der Kanäle.* R. WYSZOMIRSTI. *Demokratie und Arbeitsrecht.* DR. DISSINGER criticises German works councils as having a disintegrating influence on the loyalty and interest of the worker, thus provoking bad relations between management and labour. The intrusion of political aims has seriously interfered with the attainment of a proper economic perspective. Exhaustive proposals for reform are made. *Adolph Wagner's Nachlass in der Preussischen Staatsbibliothek.* J. KIRCHNER.

Economic Review (Kyoto).

DECEMBER, 1927. *Prices and Injustice in Taxation.* M. KAMBE. The influence of local and temporal variations in price on the real burden of taxes of different kinds. *A Study in Financial Statistics.* S. SHIOMI. The national and local finance of Japan in recent

times. *The Principles of Emigration Policy.* M. YAMOMOTO. *Tariff Freight Rates.* S. KOJIMA. The meaning, formation, merits and principles of rates fixed by general tariff, not by competition. *Population Problems in the Tokugawa Era.* E. HONJO.

Indian Journal of Economics (Allahabad).

OCTOBER, 1927. *The Hindu Taxation System.* DR. BALKRISHNA. *British India and the Gold Standard.* E. P. WELLENSTEIN. *The Economic Law of Consumption.* P. C. BASU. *Gold and French Monetary Policy.* G. F. SHIRRAS.

De Economist (Haarlem).

FEBRUARY, 1928. *Handelspolitieke gevaren.* C. F. STORK. A contribution, on the Free Trade side, to the lively controversy regarding Protection (or an "active trade policy") now proceeding in Holland. In large measure the article is a review and summary of the leading Free Trade publication which the question has evoked, Mr. J. F. Vleeschhouwer's "Actieve Handelspolitiek." *Het honderdjarig bestaan van de Javasche Bank.* II. G. M. VERRIJN STUART. The second part of a survey of the history of the Bank of Java in the last hundred years. *Een jaar de-facto stabilisatie van den Franschen franc.* A. A. VAN SANDICK. A detailed discussion of French currency and finance since July, 1926. "The most remarkable fact in the financial history of France in the last year is that the stabilisation has occasioned no crisis." The conclusion is that "there is nothing standing in the way of a legal stabilisation of the franc at approximately its present level."

MARCH, 1928. *Actieve Handelspolitiek.* R. VAN GENECHTEN. An attempt to define the real issues between Mr. Vleeschhouwer and Professor Diepenhorst in the "active trade policy" controversy, but in fact a defence of Mr. Vleeschhouwer against the criticisms of his opponent. Free trade is in the national interest; it is implicit in the protectionist position that the interest of one group, which can alone be satisfied at the cost of another group, is itself a national interest. Variations in the nature of exports and imports leading to a change in the economic structure of a country may, however, be a disadvantage. *Het Credietverkeer in de late Middeleeuwen.* Z. W. SNELLER. A summary and review of the work by Professor Kuske (of Cologne) on the rise of the credit-economy. In opposition to the view of Hildebrand, Bücher and Sombart, the machinery of credit was developed in the Middle Ages from the fourteenth to the sixteenth century. Examples are cited from the history of the lower Rhine provinces. *Een poging om het grensnut te meten.* W. L. FALK. Draws attention to Professor Irving Fisher's article on a statistical method for measuring marginal utility, published in the *Economic Essays in Honour of J. B. Clark.* Whether this method brings us what it claims is an open question. The weak point is that in this way it is only possible to compare similar families under different conditions; there are always difficulties in attempting to compare dissimilar families.

APRIL, 1928. *De Amsterdamsche Wisselbank in de zeventiende eeuw.* J. G. VAN DILLEN. Surveys the events leading up to the establishment of the Bank of Amsterdam in 1609. It was modelled on the Bank of Venice, but its primary purpose was to improve the currency which was unsatisfactory by reason of the multiplicity of mints and the excessive variety of foreign coins. The early history of the Bank and its methods of operation are discussed. *Het vraagstuk der welvaert in de Verenigde Staten.* GERLOF VERWEIJ. With reference to the appointment of the Hoover Commission surveys the explanations of American prosperity, quoting W. C. Mitchell's view that it is "anomalous." In the wide discussion that has taken place, many explanations have been advanced, but even if the presence of any one factor may have been essential to America's prosperity, it cannot be regarded as *the* explanation. The task of the Commission will be to view the various explanations in relation to each other, not to discover new explanations; and also to devise a programme for the future. *Is vrije credietcreatie door banken mogelijk?* T. J. GREIDANUS. In answer to the article by Posthumus Meyjes in the January number. There are two sections of those who advocate the view that a free creation of credit by banks is possible: (i) those who speak of an increase of outstanding credit in a conjuncture movement and of a consequent rise in prices. More credit is given and therefore more can be bought. This argument sees only the purchaser and not the other person who has given the credit and must therefore postpone his purchases. Either may purchase but not both; there is no increase in "purchasing power"; the credit that one receives another gives. (ii) The second section refers to a definite free creation of credit. Adams is quoted to the effect that "Bank credit is purchasing power manufactured by banks." Banks in giving credit are not free. Assuming the case where all banks simultaneously proceed to expansion of credit, gold will leave the country in accordance with Gresham's Law. Commercial banks have even less freedom than banks of issue, being themselves restrained by the action of the Central Banks. Credit expansion is however possible: (*a*) the need for circulating medium may increase and a part of this may be created by the commercial banks; here the banks are limited by the need for circulating medium on the part of the public; (*b*) a deposit is not merely a circulating medium, but also an investment of money. It is an investment of money, if for a fixed term of time; it is economically money when the holder becomes a purchaser. This gives another case where credit expansion by the banks becomes possible but in which nevertheless they are not free; here they are bound by the action of the public. In the case of general world-wide credit-expansion, where Gresham's Law cannot operate, the restraint on the action of the bank arises from the relation between the quantities of giral and chartal money, which is not a question of chance but is governed by economic law. Thus it is not merely in practice that the Banker is not free; his dependence is also theoretically demonstrable.

International Labour Review (Geneva).

FEBRUARY, 1928. *The European Coal Crisis,* 1926–7. M. EASTMAN. *Some Aspects of Recent Wage Movements and Tendencies in Various*

Countries. J. H. RICHARDSON. *Labour Legislation in Latin America.* M. POBLETTE-TRONCOSO. *The Moscow Institute for Economic Research and its Work.*

MARCH, 1928. *The Regulation of Minimum Wages as an International Problem.* K. PRIBRAM. The fundamental aspects of the problem, and the distinction between home-work and general industry as criteria of wage-fixing machinery; followed by a discussion of the probable outcome of the replies of Governments as published in the "Blue Report." *The Prevention of Accidents in Industrial Undertakings.* F. RITZMANN. *Seasonal Fluctuations in Employment.*

APRIL, 1928. *Labour problems in South Africa.* H. B. BUTLER. *Seasonal fluctuations in migration.* L. VARLEZ. *Hours and Wages in the German heavy iron industry.* G. NEITZEL. *The problem of hours of work in the Soviet Union. II.*

Revista Nacional de Economía (Madrid).

JANUARY–FEBRUARY, 1928. *Dinamismo de los precios y carestía de la vida.* O. F. BAÑOS. The problem of prices is connected with most other economic factors: methods of production and consumption, the rate of interest, the productivity of labour, the trade cycle. Different theories stress the quantity of money, the rate of interest or the international value of national money as the important influence determining the internal price level. This article concludes with a discussion of price indices and the outstanding theories of Trade Cycles. *Los ferrocarriles en España.* A. DE MIGUEL. A compilation of statistics showing the development of the railways in Spain since 1865. In relation to her area Spain shows a lack of railroads which is impeding social and economic growth and compares unfavourably with movements in other countries of Europe. The figures of railway growth in the world and in Spain alone show a negative correlation. *La distribution de la propiedad territorial.* M. FUENTES. In all countries since the war there has been a movement towards the break-up of large landed estates and the formation of small holdings. The problem is one not only of the transfer of ownership, but also of the provision of schemes of credit and agricultural education and the creation of a co-operative spirit. Using a sample for Spain, and comparing with figures published for other countries, the conclusion is reached that, in Spain, a greater proportion of agricultural holdings is either very small or very large than is the case in most European countries. The question of rural depopulation, however, is not influenced so much as might be imagined by this inequality in the distribution of land.

Giornale Degli Economisti (Rome).

JANUARY, 1928. *Considerazioni sui "barometri" economici.* C. BRESCIANI-TURRONI. A very interesting discussion, by the distinguished Professor of Economics at Cairo, of the methods of construction and usefulness of indices of business conditions as a means of forecasting future movements of trade. The Harvard index is criticised for using the series A, B, C (where A is Speculation, B is Business and C Money) instead of the series C, B, A. General theory, as well as direct evidence, especially of recent

German conditions, are adduced to prove that speculation is subject to so many special disturbing factors that the market values of shares at any time cannot safely be used as a barometer of the economic situation. *Intorno alla teoria del "profitto."* GUIDO SENSINI. Current notions of profits are still vague and ill-defined. So many different kinds of profits can arise, and both their causes and effects can be so diverse, that there is clearly need for a more careful analysis and classification of the various species of income which are commonly grouped together in the single term "profits." *La teoria della popolazione di Giammaria Ortes.* ALBINO UGGÉ. Ortes was one of the three outstanding clerical writers on population of the eighteenth century. He was a Catholic priest, while Süssmilch was a Lutheran pastor and Malthus an Anglican clergyman. Ortes held, with even greater dogmatism than Malthus, the view that population was capable of expanding in a geometrical ratio and must inevitably tend to increase with any increase in the means of subsistence; but he believed that, in practice, social and political forces could hold this tendency in check and, indeed, often prevented population from bearing that relation to the means of subsistence which exists in the "natural" order of things. But if the population of a country, owing to faulty institutions, is smaller than it ought to be, the inhabitants are not better but worse off than they would be if their number was larger, because the smaller population would restrict production and prevent it from reaching its proper maximum. The writer sets out clearly and well the background of ideas which conditioned the views of Ortes and the abstract form in which these were presented.

FEBRUARY, 1928. *Per riempire alcune "empty boxes" finanziarie.* ATTILIO CABIATI. Stimulated by Mr. Robertson's attack on part of the economic reasoning of the Colwyn Report, Professor Cabiati comes to the defence of Marshall's conception of the representative firm and denies the proposition that prices are governed by the marginal firm whose cost of production is highest. But he believes that this knocks the bottom out of the doctrine that a general tax on all income is not reflected in cost of production. When first imposed, such a tax will have important differential effects, varying according to different elasticities of demand—every income-receiver endeavouring as far as he can to pass the tax on. Whether such a tax will tend to raise general prices, through increasing costs all round, will depend on the use made by the State of the proceeds of the tax, which may be employed so as to increase productivity. *Alcune considerazioni sulla teoria matematica dell' equilibrio economico.* ARRIGO BORDIN. The methods of the elementary differential calculus are applied to the theory of the equilibrium position of value, under a number of different assumptions, without, however, throwing new light on the problems involved. *Il caso, la congiuntura ed il rischio nell' evoluzione economica.* FEDERICO CHIESSA. Chance operates in the field of uncertainty, and risk in the sphere of probability, while conjuncture is "the variation in the value of goods and services which is produced by events which are unforeseen and independent of man's volition." It is concluded that "economic progress does not tend to diminish chance, risk and conjuncture, but rather to increase

them." It tends "to lessen static risks, but, on the other hand, to enhance the subjective appreciation of chance in general and the whole complex of dynamic risks."

MARCH, 1928. *Vigilanza sulla creazione di moneta bancaria.* GIUSEPPE UGO PAPI. It is not sufficient for the State and the Central Bank to exercise a careful control over the note issue, as the development of deposit banking and the use of cheques can lead to an autonomous inflation of purchasing power. The deposit banks have an important duty to the community to observe the principles of sound banking and to watch for any symptoms of over-creation of credit. *Il consiglio d'amministrazione e l'interdipendenza delle imprese.* PIERPAOLO LUZZATTO FEGIZ. A detailed investigation, of an elaborate character, into the composition of boards of directors of Italian companies in 1923, and into the extent to which interlocking directorates existed in that year in Italy.

La Riforma Sociale (Turin).

JANUARY–FEBRUARY, 1928. *Postumi d'inflazione.* GIUSEPPE PRATO. The aftermath of inflation is to be seen, not merely in the economic sphere, where it produces disordered finances, instability of exchanges, high tariffs, and so on, but also in the sphere of ideas, where crops of fallacious theories are engendered which disturb clear thinking and even mislead statesmen to the public injury; in the deterioration of public and private morals; and in every aspect of social life. *Caratteristiche dell' esportazione dei capitali in regime di valuta sana.* ATTILIO CABIATI. A discussion, along lines familiar to English students, of a number of technical aspects of the export and import of capital. *La politica commerciale doganale italiana nel dopo-guerra.* GIUSEPPE FRISELLA-VELLA. A plea for a return to the liberal principles of Cavour in matters of commercial policy and for the abandonment of protection, which is checking the specialisation and division of labour, on whose basis alone a healthy economic system can be built up. *Il balancio statale d'Italia pel 1927–8.* GIULIO CURATO. *Intorno al pagamento degli stipendi e salari con assegni di banca.* EDOARDO GIRETTI.

MARCH–APRIL, 1928. *Yves Guyot un grande campion della libertà.* EDOARDO GIRETTI. *Gli Stati Uniti fanno prestiti all' Europa?* LUIGI EINAUDI. The writer quotes figures, drawn partly from a memorandum by Mr. Hoover, showing that in 1926 the United States, which apparently invested \$1357 m. abroad, actually had a deficit on her total balance of \$8 m. when all items were taken into account. Hence he concludes that Europe had predominantly been borrowing funds from the United States which it had previously lent to her. The reasons for this are: (1) that Europe has not sufficient confidence in itself; (2) that it has greater belief in the political and financial stability of the United States; (3) that by using the United States as an intermediary there is a better guarantee that borrowers will not default on the interest and sinking fund payments on the loans made to them; (4) that Americans are stricter than European lenders would dare to be in demanding adequate security, and that they can often obtain advantages such as exemption from taxation and other favourable treatment which

would not be accorded to European nationals. *La tassabilità del risparmio.* UMBERTO RICCI. With the aid of calculations based on a hypothetical case, it is claimed that a proof is established that an income tax, which taxes both income saved and the interest derived therefrom, does not, in fact, involve the double taxation of saving. This is a summary of a longer article in French by the same writer in the *Revue d'Économie Politique* for May–June 1927. *Sulla doppia tassazione del risparmio.* MAURO FASIANI. An attack on Signor Ricci's views set out in the article referred to above, and a defence of the doctrine that a general tax on all income discriminates against saving. *Le oscillazioni dei prezzi in rapporto al fenomeno fallimentare.* ITALO RICALNOVI. A correlation of price movements in Italy since the war with numbers of bankruptcies does not bear out the common view that bankruptcies are to a large extent the unavoidable sequelæ of trade depressions and falling prices. They are in great measure the direct consequence of imperfect legislation which fails to put a stop to fraudulent practices. If bankruptcy laws were made more severe, and if those who had once been declared bankrupt were thenceforward excluded from membership of industrial and commercial associations, the number of failures would be very greatly diminished. *Di alcuni importanti problemi di finanza: a proposito dell' ultima opera del Pigou.* LUIGI EINAUDI. A long and important review article, devoted to a criticism and appreciation of Professor Pigou's book, *A Study in Public Finance.*

Scientia (Bologna).

FEBRUARY, 1928. *A situazioni economiche e sociali nuove, sistemi tributari nuovi.* B. GRIZIOTTI. Modern economic development, tending as it does to produce new economic and social conditions —the growing urbanisation of population with consequent higher standards of living; new types of wealth such as bearer bonds; collective organisations such as joint stock companies, corporate bodies of many kinds, private and public; the international diffusion of capital, etc.—renders necessary a reorganisation of the financial systems of progressive countries, so as to bring their methods of taxation, which are the outcome of a long-drawn-out historical evolution, into conformity with the facts and requirements of contemporary institutions.

Annali di Economia (Milan).

MARCH, 1928. *Discussione del sistema di equazioni che definiscono l'equilibrio del consumatore.* L. AMOROSO. *Teoria economica dell' assicurazione.* G. DEL VECCHIO. *Il commercio italo-argentino.* M. GUASTAMACCHIA.

Ekonomisk Tidskrift (Upsala).

1927, No. 1. *Some Questions concerning the Industrial Revolution in England.* A. MONTGOMERY. On the basis of some new publications the author makes an attempt to compare the industrial revolution in England with the corresponding economic processes in continental countries. The mutual connections between the various factors in this development—technical improvements, social institutions, supply of capital and labour, etc.—are discussed

and their relative importance considered. *Are Public Debts to be Amortised?* DAVID DAVIDSON. A sketch of a theoretical analysis founded on the classical conceptions of productivity and of money income.

1927, Nos. 2–4. *The Development of Wages in Swedish Industry.* G. ÅKERMAN. From 1913 to 1925 the hour's wage in Swedish industry and transport had increased by 163 per cent., while the costs of living had increased only by 76 per cent. As the improvement of labour efficiency during the same period amounts to at most 7 per cent., we may estimate that the real wage paid for a working hour of given efficiency had enhanced by not less than 40 per cent. Extremely high was the increase of real wages within local industries and other trades outside foreign competition. In agriculture, however, the real wages remained about the same. As is well known, Swedish industry during the last quarter of a century before the beginning of the war was in process of steady expansion, which as a natural consequence involved an increase in real wages of about 10 per cent. in a decade. During the war the industrial expansion was accelerated, and because of that a continual increase of wages was reasonable. Furthermore, the international development of prices was advantageous for Sweden, as in 1925 the index-number for the prices of the foreign raw materials used in Swedish industry was about 130, while the index-number for the prices of the finished products was 165. These two facts together explain, according to the author's opinion, about half of the increase of real wages. The remainder, and especially the large increase of wages within the local industries, must, on the contrary, be attributed to the strenuous monopolistic policy of the trade unions during these years, facilitated by the deflation of prices 1920–22. A consequence of the increased wages is that from 1920 the usual expansion of Swedish industry has been rather deferred. A further result was extensive alterations of the technical methods of production in order to become more labour-saving. On an average there was in 1913 2·48 horse-power per workman, but in 1920 there was 3·19. Thus, the number of workmen in manufacturing industries has diminished from 417,000 in 1920—when, however, there were great trade disturbances—to 392,000 in 1925. These limitations, together with the usual growth of population, have caused a considerable permanent unemployment, which in 1925 probably amounted to from 70,000 to 80,000 unemployed (as against a normal figure before the war of about 25,000 to 30,000). The final cause for this extraordinarily large unemployment is monopolistic policy of the trade unions in order to raise the wages. Thus "the Device of the Common Rule," practised in this efficacious manner, has after some time appeared to be "a Device of Restriction of Numbers." *The Effects of the New Gold Policy.* DAVID DAVIDSON. The money policy practised by the United States during the last years does not seek to maintain a stable price level, but to regulate credit facilities in such a manner that business and production may go on in a normal way. Another important principle of this money policy is not to allow the gold supply in the U.S. to exercise any influence upon prices, rates of interest, etc. The possibility of carrying through this policy under various conditions is discussed. In the European gold currency countries, however, the price level is

not liberated from these influences of gold movements. If, therefore, the normal relation between the price level in the U.S. and the price levels in other gold countries is disturbed, the effect is that only the latter price levels are compelled to undergo the changes which are necessary to restore the state of equilibrium. This fact is important if we consider that the process of rationalising production is going on faster in the U.S. than elsewhere. This tendency of sinking relative costs of production enables that country to retain a prosperous state of affairs during declining prices, while the pressure on the price level in other countries may for their part involve bad times until they are able to bring out the same improvements in their own production.

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1927, Nos. 7–9. *Some Problems from the History of the Development of Banking.* A. MONTGOMERY. The great differences between countries as to the organisation of the credit and money market is due partly to the different stages of economic development and partly to the difference of banking policy and other institutional conditions. *The Monetary Policy of Europe.* DAVID DAVIDSON. The author criticises the proposals of the Genoa conference. The conference assumed that a gold standard system of pre-war type would be prevalent also after the war. It was not foreseen that the Federal Reserve Banks by their new monetary policy would prevent those changes of the price level in the U.S. which under pre-war conditions should have been caused by the export and import of gold. The aim of the new policy seems to be the maintaining of normal conditions of production but not the maintaining of a stable price level. The policy of the European countries, on the other hand is in a rather high degree still dependent on the fluctuations of the gold supply. As long as this difference between the U.S. and Europe remains the value of the dollar will determine the value of gold, and viâ gold also the value of money in the European countries which have adopted the gold standard. The discount policy of the Bank of England in 1925 is criticised. The recent attacks against the Federal Reserve Banks are reviewed and criticised. The power of controlling the price level of other countries which the U.S. now possesses is limited by the volume of the gold reserve of the Federal Reserve Banks. The present discords between the U.S. and the other gold countries could,

according to the author, partly be avoided if the European Central Banks collaborated in creating a monetary policy of the same kind as that of the U.S. It is not possible to anticipate the result of an experiment like this, but undoubtedly it would be worth while to try. Then the U.S. would no longer have the power of controlling the European price level.

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THE ECONOMIC JOURNAL

SEPTEMBER, 1928

THE INSTABILITY OF CAPITALISM

I. *Economic Stability under Static Conditions*

§ 1. The many "instabilities" created by the War and by post-war vicissitudes, whilst very properly engaging the attention of economists in all countries both as to diagnosis and as to remedial policy, do not, in themselves, present to science any new or startling problems. There is nothing strange in the fact that events such as the breakdown of Russia or, generally, disturbances arising from without the sphere of economic life, should affect its structure, its data and its working. In this paper I shall disregard them entirely, and deal merely with the question whether or not the capitalistic system is stable in itself that is to say, whether or not it would, in the absence of such disturbances, show any tendency towards self-destruction from inherent economic causes, or towards out-growing its own frame. The interest of such an investigation is primarily scientific; still, an answer to that question is not without some diagnostic value, and, therefore, not without some, if remote, bearing upon policy; especially as there is, it seems to me, a marked tendency to reason upon post-war figures and about post-war problems, exactly as if they reflected something like the normal working of our economic system, and to proceed, on this basis, to conclusions about the system as such.

By way of clearing the ground, it may be well, first, to distinguish the kind of stability or instability we propose to discuss, from other phenomena covered by the same terms. Looking, for instance, at France, with her stationary population and enterprise and her vast colonial empire, and at the opposite state of things in Italy, the observer may well have an impression of instability—let us call it, "political" instability—which, however, has nothing to do with economic instability in our sense; for in the economic systems of these countries there might still be perfect stability. Or if we assume a state of things in which the whole of the industry of a country is

monopolised by one single firm, we should probably agree in calling such a system unstable in a very obvious sense—let us label the case as one of "social instability"—whilst it could be highly stable economically. Instability in still another sense would obtain in a system, for which equilibrium wages were at a point below what workers will put up with—although there need not be any tendency in the economic conditions themselves to produce any change at all *by the mere working of the system.* Finally, special cases of instability may arise from particular influences from without, which cannot properly be charged to the economic system at all. England's return to the gold standard is a case in point. "Stabilising" the pound at what was, viewed from the standpoint of existing conditions, an artificial value, naturally meant dislocating business, putting a premium on imports and a tax on exports, intensifying losses and unemployment, thereby creating a situation eminently unstable. But this instability is evidently due to the act of politicians, and not to the working of the system which, on the contrary, would have evolved a value of the pound exactly fitting the circumstances. In short, the economic stability we mean, although it *contributes* to stability in other senses, is not *synonymous* with them, nor does it *imply* them. This view must, of course, seem highly superficial to anyone who assumes the existence of as close a relation between the economic and other spheres of social life as, for instance, Marx did. As, however, it would be waste of time to prove to English readers the necessity of separating these several spheres, I may confine myself to these remarks.

Secondly, we have to define what we mean by "our economic system": We mean an economic system characterised by private property (private initiative), by production for a market and by the phenomenon of credit, this phenomenon being the *differentia specifica* distinguishing the "capitalist" system from other species, historical or possible, of the larger genus defined by the two first characteristics. Although few things seem to me to be more firmly established by historical research than the fact that economic history cannot be divided into epochs corresponding to different systems, it is still permissible to date the *prevalence* of capitalistic methods from about the middle of the eighteenth century (for England), and to call the nineteenth century κατ' ἐξοχήν the time of *competitive,* and what has so far followed, the time of increasingly "*trustified,*" or otherwise "organised," "regulated," or "managed," capitalism.

Thirdly, capitalism may be stable or not, simply in the sense that it may be expected to last or not. Its history might be full of the most violent fluctuations or even catastrophes—as it undoubtedly has been so far—and these fluctuations or catastrophes might even be inherent in its working—which precisely is what we want to form an opinion about—and we might still, in a real sense, have to call it "stable" if we have reason to expect it to last. Whenever we mean no more than this—that is to say, when we merely mean to speak of the question of what may be termed the institutional survival of capitalism, we will henceforth speak of the capitalist *order* instead of the capitalist *system*. When speaking of the stability or instability of the capitalist *system*, we shall mean something akin to what business men call stability or instability of business conditions. Of course, mere instability of the "system" would, if severe enough, threaten the stability of the "order," or the "system" may have an inherent tendency to destroy the "order" by undermining the social positions on which the "order" rests.

§ 2. The business man's meaning of stability we have now to translate into the language of theory. It will shorten matters and facilitate exposition if I state at the outset that, barring differences on a number of particular points, the following remarks run entirely on Marshallian lines. But I could equally well call them Walrasian lines. For within serious economic theory there are no such things as "schools" or differences of principle, and the only fundamental cleavage in modern economics is between good work and bad. The basic lines are the same in all lands and in all hands: there are differences in exposition, in the manner—and mannerism—of putting things, for example, according to the relative importance different authors attach, respectively, to rigour and generality or to vicinity to "real life." Then there are differences in technique, the very greatness of Menger, Böhm-Bawerk and Wieser, for example, consisting in their having achieved so much with such shockingly clumsy and primitive tools, the use of which was an insurmountable bar to correctness. There are, furthermore, differences in individual pieces of the analytic machine—as, for example, between the Walrasian and the Marshallian demand curves, or between the rôle assigned to coefficients of production respectively by Marshall and Walras—Pareto—Barone. Finally, there are differences as to particular problems, the most important of which are the theories of interest and of the business cycle. But this is all. There is no difference in fundamentals—Clark's productivity or Walras' equilibrium or

the Austrian imputation or Marshall's substitution or Wicksell's compound of Walras and Boehm-Bawerk being all of them in the last analysis the same thing, and all, in spite of appearances to the contrary, equally far removed from, and at the same time and in the same sense descendants of, Ricardo's patchwork.

The economic system in the sense of conditions and processes reduces itself for the purposes of Theory to a system in the scientific sense of the word a system, that is, of interdependent quantities—variables and parameters—consisting of quantities of commodities, rates of commodities and prices, mutually determining each other. This system has been found to be stable, and its stability to be amenable to rational proof, under static conditions. Not as stable, it is true, as economists would have held sixty years ago, when most of them—nearly all, in fact, except the Marxists—would have most confidently asserted absolute stability both of the capitalist *order* and the capitalist *system*: stability has fared very much as the theory of maximum satisfaction did. Just as newer methods, whilst yielding correct proof of what they left of the competitive maximum, have considerably taken away from its importance, so similarly, whilst showing that we have, generally, as many equations as we have "unknown" quantities, and therefore a determined state of equilibrium corresponding to a given set of certain data which turns out to be stable under appropriate conditions, they have also shown that the exceptions to this general "determinateness" are considerable. Even apart from cases such as the possibility of the offer curve of labour [1] curling back or such as the case of the value of money in a system of bimetallism without legal ratio,[2] we have many instances where equilibrium cannot be said to be determinate. The case where both supply and demand are inelastic, is an example.[3] It may be said, for example, that the

[1] This, of course, does not make equilibrium entirely indeterminate, but only makes the system have several, mostly two, different solutions.

[2] It is worth while emphasising, however, that there is no indeterminateness *when two or more commodities circulate as money and every transaction is* concluded specifically in one of them. The instability only arises if contracts are in terms of "money" generally, so that payment can be made in any of those commodities.

[3] Another has been pointed out by Wicksell, *Geldwert und Güterpreise*: If coefficients of production be constant and if there be no alternative use for the factors of production their quantity being, moreover, fixed—then there would be indeterminateness of their shares in the product. Still others have been discussed by Marshall, Edgeworth, Taussig ("Is Market Price Determinate?" *Quarterly Journal of Economics*, 1921, and Divisia (*Economique rationnelle*, 1928, p. 410: This case of indeterminateness arises only from the absence of any true marginal utility of *money*. It has been pointed out before by Prof. Cassel, and is, of course, easily remedied.)

home demand for wheat in the United States is highly inelastic within a considerable interval of price. Supply, again, though very variable, is equally inelastic—if it be permitted to apply this term to supply for shortness sake—within intervals of time too short to allow for extension or contraction of acreage; and this may, perhaps, partially explain the instability of American farming.

But although illustrations of this and other cases abound, the determinateness of static equilibrium under competitive conditions is yet a broad basic fact, and this equilibrium is stable, provided that supply price[1] the price of "willingness to sell"—is an increasing function of quantity of product. This condition rests on the fundamental fact that the extending of production by any given industry means withdrawing quantities of factors of production from increasingly "important" other uses, which, of course, does not show within single firms—any more than the influence on demand price of increasing output shows within the field of action of single firms in a state of pure competition—but is yet the force the balancing of which against decreasing marginal utilities of product determines the distribution of resources between industries. There is, it is true, an interval for practically every industry in which this condition is not satisfied, owing to the tendency which it embodies being overcompensated by fixed costs distributing themselves over an increasing number of units of product. As long as this is the case, there cannot be a point of stable equilibrium.[2] But the

[1] The supply price schedule meant here is the series of supply prices at which, given the methods of production actually in use and embodied in given plants and under given general conditions and trade practices, the respective quantities of product would be forthcoming. The schedule, therefore, refers, in an obvious sense, to a point of time. It does not, however, take account of chance occurrences, such as momentary market situations on the one hand; and it does not, on the other hand, take account of any but marginal adjustments, *capable of being decomposed into infinitesimal steps*: so it might be called a short period, normal. But the objections to this would be the implication of the existence of some long-period normal and, besides, the emphasis which this manner of expression lays on the element of time, whilst the important thing is not the lapse of time as such, but what happens during it.

[2] Not even if, in the familiar illustration, the demand curve cut the supply curve negatively. For even then it must be to the interest of every single producer, who *ex hypothesi* neglects the influence of his own action on price, to go on producing in this case. Whilst this lasts, there is *movement* towards equilibrium (and this distinguishes *this* case of "increasing returns" fundamentally from others), but not equilibrium itself. Whilst other cases of the compound called "increasing returns" *vires acquirunt eundo*, and thereby may lead up to a monopoly, this one can hardly do so. It may offer, however, instances of increasing cost for an industry as a whole in the face of the presence of decreasing unit cost in every single firm.

effect of this spends itself necessarily and, therefore, stable equilibrium will nevertheless eventually emerge, although there may, and often will, be a prior instability—instability of the kind which is one of the sources of what is called "over-production."

Any other cause of "increasing cost" is excluded by the static hypothesis, the justification for accepting such an arrangement being that it separates clearly different sets of phenomena, which stand in need of different treatment. Innovations in productive and commercial methods, in the widest sense of the term—including specialisation and the introduction of production on a scale different from the one which ruled before—obviously alter the *data* of the static system and constitute, whether or not they have to do with "invention," another body of facts and problems. And so does that part of "external economies," which is represented by such instances as the trade journal, the bureau of standards, the "pooling" of reserve stocks of materials incident to the presence of a large market in them and so on. The reader is asked to stay judgment about the exclusion of these things until later. Here it is only necessary to point out that we should have to emphasize the heterogeneous nature of all these phenomena the very moment we included them. In any case we should have to recognise that there is no "law of decreasing cost" of the same kind as, and symmetrical to, the law of increasing cost.[1] The relation of the two can, perhaps, be best seen by means of the analogy with the "demand side"

[1] By law of increasing cost we may mean four things entirely independent of one another: first, we may, as above, mean what is of the very essence of the economic process and, indeed, only another way of stating the law of satiable wants, that the significance of successive doses of means of production must always increase as they are drawn into any one industry for the reason that they are actually or virtually taken away from others. Secondly, we may, as pointed out before, mean that successive doses of any one factor of production applied to a constant quantity of the others yield a decreasing physical increment of product, everything, especially method, remaining the same. The most "practical" way of making use of this proposition is to consider a given plant, embodying both a given method of production and an inelastic set of supplementary costs, and to vary elements of prime cost one at a time. This is perhaps the best tool we have to deal with the routine work of the management of a single firm. It has, however, nothing whatever to do, thirdly, with a community being driven in the process of expansion of production to exploit less and less fertile productive opportunities. This has been well stated in Prof. Sraffa's acute study, "Relazioni fra costo e quantita prodotta," *Annali di Economia*, 1925, epitomised in an article in this Journal, December 1926, and commented on by Prof. Pigou in the issue for June 1927. And, fourthly, there is the prophecy to which Ricardo owes the epithet of pessimist, that improvements (in agriculture) of productive methods will in the long run fail to counterbalance increasing costs in the second and third sense, in case population should keep on increasing.

of the problem. Empirically we evidently could arrive in very many cases at demand curves which would slope upwards instead of down (cp., for example, Prof. Moore's demand-curve for pig iron). And there are, of course, very many similar cases, the special point of interest about the pig-iron curve being the fact that its periodicity is indicative of the business cycle. Nobody, however, thinks less on that account of what is universally considered to be the "true" slope of the theoretic demand curve. Everybody, on the contrary, recognises that what happens in such cases is a shifting—by which term we mean to cover inexactly not only displacement but also distortion—of the theoretic curves, every one of which retains its fundamental characteristic in obedience to the "law" it has been constructed to represent, and that any curve displaying a positive slope is merely a statistical [1] or historical curve fitted through a family of successive theoretic ones. The same applies to—if I be permitted to waive for the sake of shortness the objections to speaking of so doubtful a thing—supply curves. There is only one theoretic supply curve; and it slopes upwards in all cases. Changes of data do not make it slope down, but shift it, or, more correctly, break it off [2] and start a new one. And through these changing positions—in all of which these curves retain their slope and meaning—we may, if we so choose, fit historical curves, which will certainly often slope down. They will, in fact, display

[1] The theoretic curve can, of course, be determined statistically without ceasing to be a theoretic curve, the above distinction not turning on the fact, or possibility, of statistical determination, but on whether or not the curve expresses or illustrates *a theorem*, thereby acquiring logical unity as distinguished from what could be termed "descriptional" unity. Now I am far from overrating the importance of this distinction: On the one hand, theory itself is only a way of describing facts; on the other hand, any descriptional unity may, by some progress of analysis, turn into a logical unity any moment—in fact, the frontier between the two continually shifts in the progress of science. But this is no reason for simply ignoring it and for co-ordinating things, which do not stand on the same plane.

[2] This links up with another distinction, the importance of which is best seen by means of an example: Von Böhm-Bawerk's theory of interest stresses the importance of the "roundabout" process of production. But it is not the *running* of production of a given degree of roundaboutness which matters, but *the act of introducing* greater "roundaboutness." There is a drop—in its nature discontinuous, irregular, "unpredictable" and "historically" unique—in costs the moment production starts on the new plan (on *any* successful new plan, no matter whether it involves roundaboutness or not), but there is no further and continuous saving of costs per unit of product in the running of it. Generalising: Changes of *data* may be represented by lines connecting the displaced and distorted theoretic curves. If they are small and frequent, these lines may themselves *look* like our curves. But they never *are* theoretic curves and have not, in this sense, any theoretic meaning.

no regularity at all. It may not even be quite easy, in some cases, to guard against the supreme misfortune of total cost being actually smaller for a greater output than for a lesser one, for changes of *data*, once admitted, would sometimes produce this result, which could not, in competitive circumstances, be handled by assuming that the larger quantity would be produced but partially destroyed.[1]

There is nothing new or startling in thus limiting the scope of this part of our analytic engine. In fact, we are doing no more than to sum up what has been an unmistakable doctrinal tendency ever since it came to be recognised, first, that increasing cost in the sense of decreasing physical response to productive effort applied to a constant quantity of one of the factors is no peculiarity of agriculture, but a general phenomenon—a phenomenon which, given the same conditions, applies to all kinds of production and, given other conditions, does not apply even to agriculture; secondly, that there is a more fundamental tendency at work to make the second derivative of total cost with respect to output positive, and one which has nothing to do with the physical "law of decreasing returns," whence the difficulty of filling certain empty boxes. We are merely clinching, on the one hand, what seems to us to be the true real-cost-phenomenon, and, on the other hand, what seems to us to be both the meaning of economic "statics" and the nature of static equilibrium. That this is perfectly in keeping with the fundamental drift of Marshallian analysis, I will try to show in a footnote.[2]

[1] Cf. H. Schultz, "Theoretical Considerations Relating to Supply," *Journal of Political Economy* for August 29, p. 441. Therefore the assumption $\frac{dy}{dx} > 0$ remains arbitrary, unless reinforced by Cunynghame's criterion $\frac{dy}{dx} > \frac{y}{x}$.

[2] Marshall indeed, repeatedly protests against the limitations of the static apparatus (cf. especially a letter of his to Prof. John B. Clark). Now if it were true that reasoning by means of it is "too far removed from life to be useful," then the greater part of the analysis of the *Principles* would be useless—as would be the greater part of any exact science: For Marshallian analysis rests just as much on static assumptions as Prof. Clark's structure. But it is not true. There is nothing unduly abstract in considering the phenomena incident to the running of economic life under given conditions taken by themselves. On the contrary, it means giving this class of problems the treatment they require. And Marshall himself has contributed substantially to the perfection of this treatment by forging such invaluable tools as his consumer's surplus and his quasi-rent. He has, furthermore, made use of static assumptions both in his theory of distribution and in the fundamentals of his catallactics; in fact, in one decisive point, when dealing with refinements calling for rigour of analysis, he has confined his argument to increasing cost. And he has, finally, himself insisted on the irreversibility of, and on the difficulties peculiar to, a declining supply curve, and come, in doing so, very near to saying much the same as what has been said above. Loyalty to

§ 3. There seem to be, however, two other sources of instability due to indeterminateness within the precincts of the "static" system. By universal consent, single monopoly yields determined and stable equilibrium, but dual and multiple monopoly, or, generally, the case in which firms can and do take account of their own influence on price, is held, by very high authorities, to fail to do so. Cournot's treatment and the objections raised against it, first by Bertrand and then by Edgeworth, are well known. As this case is not only more important practically than either of the cases of "free, pure or simple" competition on the one hand, and of single monopoly on the other, but also the more general one in a theoretic sense—for the competitive hypothesis is, after all, an additional condition and very much in the nature of a crutch—the breach in our wall seemed a rather serious one. To clear up the matter has been one of the last of the many services Knut Wicksell has rendered to science.[1]

tradition, aversion to appearing too "theoretical"—which carried so much weight with him—and that tendency of his, to which we owe so much in other respects, to take short cuts to the problems of practical life, may account for his not taking the final step and for what I cannot but agree with Mr. Keynes in considering the least satisfactory part of his analysis, successfully assailed by Prof. Sraffa. This entailed a string of consequences, but fundamentally what we have said is but a development of a trend overlaid indeed by other things, but yet present in the *Principles*.

We may add the weight of Prof. Pigou's authority. For in the article quoted in a previous note, he excludes, for the sake of "logical coherence" of the cost function, the bulk of those phenomena, which we ourselves propose to exclude for the same reason. He, indeed, even rules out what we have called the fundamental law of cost ($\phi''(x) > 0$). But this he does merely on the technical ground that it is "impossible to construct a cost function" in the event of changes in the relative values of factors of production being liable to occur in consequence of changes in the scale of production of an industry. On the other hand, he does not entirely rule out external economies. But what he retains of them are merely "variations in aggregate costs associated with, and due to, variations in the scale of output" (*l.c.* p. 189); and if we insert, as we must, the word "automatically" in this sentence, very few, if any, cases will be found to answer the criterion, as has been pointed out by Prof. Young (*Quarterly Journal of Economics*, August 1913, p. 678). Of course, expansion and improvement are closely allied in real life. But, as we shall try to explain in the text, the main causation is the one from improvement to expansion and cannot adequately be dealt with by static analysis at all. If this be correct, Prof. Pigou's position will be seen to approach closely the one taken up in the text, if the reader take hold of the fact, that economies, before becoming "external," must generally be internal ones in some firm or firms of the same *or some other* industry.

I do not mean, furthermore, to raise by what I have said objections to the attempts to determine cost functions statistically. On the contrary, I am a humble admirer of the pioneer work done by Prof. H. L. Moore and his followers, even though I beg leave to point out that to speak of "moving equilibria" may prove misleading, in the face of the fact that what really happens is *destruction* of equilibria in the received meaning of this term.

[1] It is with reluctance that I contradict the great shade of Edgeworth. But there seems to be no warrant to assume indeterminateness in the case of what

The simplest form of the second case of what I call "correspective prices" is presented by exchange between two monopolists. It is again Prof. Edgeworth's authority which accounts for well-nigh universal acceptance of the view—first expressed by him in his *Mathematical Psychics*—that there is indeterminateness of price within an interval (on the contract curve) which must in general be considerable. He even went so far as to describe the state of things in a trustified economic world as a "chaos." Here, therefore, is a rich source of instability opened up. Naturally, any theorist might well be tempted to link up what instabilities he sees with this possible explanation of them. Nor can we reply by pointing to the fact that prices fixed

Prof. Pigou calls Monopolistic Competition. Taking into consideration the limiting instance only, that of Duopoly, which can be easily generalised, and assuming both competitors to be in exactly the same position, we are, first, faced by the fact that they cannot very well fail to realise their situation. But then it follows that they will hit upon, and adhere to, the price which maximises monopoly revenue for both taken together (as, whatever the price is, they would, in the absence of any preference of consumers for either of them, have to share equally what monopoly revenue there is). The case will not differ from the case of conscious combination—in principle—and be just as determinate. The only other alternative which presents itself in the absence of any hope of driving the competitor out of the market, is best "visualised" by starting from one monopolist controlling the market and then introducing a second one (Cournot's procedure). It is perhaps more "realistic" to assume that the first monopolist will not, as would be to his ultimate advantage, readily surrender half of his market to the newcomer, but that the latter will have to force his way in. And this case is equally determinate, as has been shown by Wicksell in his review article on Prof. Bowley's "Groundwork" (*Ekonomisk Tidskrift*, 1925, and *Archiv für Sozialwissenschaft*, 1927). Taking, as the unit of the price p, that price at which the output would be zero, and, similarly, as the unit of the quantity sold x, that quantity which could be disposed of at the price zero (Edgeworth), we have $p = 1 - x$. A single monopolist would, if there are no costs, maximise px and charge a price of $\frac{1}{2}$, selling $\frac{1}{2}$. The second man, having to face this situation, will obviously maximise *his* output, x, multiplied by price—that is, $x_2p = x_2(\frac{1}{2} - x_2)$, and, therefore, sell $\frac{1}{4}$. Whereupon the first will have to readjust *his* output, x_1, and to offer $\frac{3}{8}$ and so on. This finally leads to a limit at the price of $\frac{1}{3}$, when each of the two sell $\frac{1}{3}$, the price being higher and the quantity sold smaller than under competition. There is nothing absurd in this. It cannot be objected that neither of the two competitors is justified to assume, in deciding on how to adjust his output, that the other will stick to *his*. For no such assumption is really involved, the above argument aiming only at describing the process of *tâtonnement*, out of which the equilibrium price is finally bound to emerge, and things would remain substantially the same if some of the steps were to drop out—just as the equilibrium of perfect competition does not necessarily come about by every one of the theoretical steps of bidding actually taking place in practice. Nor can it be said that the two monopolists would, on reaching what we have called the equilibrium price, try to retrace their steps. For neither of them could do so singly without losing his customers. They could do so only together—the case would become one of single monopoly. The same result has been independently arrived at by Dr. Chamberlin in his *Monopolistic Competition*, as yet unpublished.

by trusts display in many and important instances much less fluctuation than could be expected under competitive conditions; for non-economic forces, pressure of public opinion or fear of government action, for instance, might account for that. And the authority of Prof. Edgeworth has been reinforced by the not less weighty authority of Prof. Pigou.

Now it is perfectly true that there is, in this case, just as in the case of one-sided monopoly, much less *guarantee* of a tendency towards equilibrium prices actually asserting itself. We have much less reason to expect that monopolists will, in either case, charge an equilibrium price, than we have in the case of perfect competition; for competing producers *must* charge it as a rule under penalty of economic death, whilst monopolists, although having a *motive* to charge the monopolistic equilibrium price, are not forced to do so, but may be prevented from doing so by other motives. Furthermore, it is quite true also, that such things as bluffing, the use of non-economic force, a will to force the other party to their knees, have much more scope in the case of two-sided monopoly—just as cut-throat methods have in the case of limited competition—than in a state of perfect competition.

But there is yet more than academic interest in stating that our theory does not break down at this point. Equilibrium is determinate even in this case—even if we take so extreme an instance as a trade union comprising all the workmen of a country, quite sure of the allegiance of its members, capable of preventing immigration from abroad or from other strata of society, and an employers' union similarly constructed. If we assume that each party has a definite monopoly-demand-curve and knows the curve of the other; that each party wants to get the best terms it can—the workmen's union offering varying amounts of labour and providing for those of its members who may have to be kept unemployed—without attempting to attain victories or to inflict defeats; and that the contract is to cover the whole period of account (the "*uno actu*" condition), then the barter point between the parties is perfectly determined, and *not* only the range within which there will be barter. It could be indeterminate only for reasons which would make the case indeterminate also in competition. Nor can it be held that the assumptions alluded to are so very far from reality. They are, if anything, nearer to reality than the assumptions implied in the idea of theoretically perfect competition: It is, for instance, much more common than observers believe whose attention is naturally focussed on abnormal cases, for employers and workmen to meet in precisely

the frame of mind assumed, and to view with misgivings all the economic, political and social risks of holding out or of a struggle, which may turn out bad business even in the case of success. By proceeding by way of Walras' *prix crié par hazard* or simply by inspecting the two schedules plotted against one another, our statement will too readily be found to hold good to make it necessary to give formal proof.[1]

§ 4. So there is rather more of stability [2] about the economic system than we should expect on most of the authoritative statements. But how much this amounts to, depends entirely on the nature of that other restriction, which we have introduced alongside of the competitive assumption just discarded: the "static state," which we define both by a distinguishable set of facts and by an analytic apparatus or theoretical point of view. The set of facts consists in the sum of operations which form the essence of the ever-recurring circular process of production and consumption and which make up a self-contained whole. It is no valid objection to say that this process cannot be thought of independently of growth or, generally, change. For it can.

[1] The well-known Edgeworthian apparatus commonly used to prove the contrary merely shows that the *elements described by it* do not suffice to determine more than a range. Prof. Bowley in his "Groundwork" reaches, in dealing with the case of one employer and one workman, the result of incompatibility of the respective maxima only by implying that the workman could produce the product by himself. The "Groundwork" contains, however, two most suggestive approaches to the problem of universal monopoly, the one embodied in a note carrying that title, the other leading to the theorem that there is determinateness in the case of *either* the products *or* the factors—but not both of them being monopolised. Arguments analogous to those of our text seem to show that at least the same sort of determinateness obtains in these cases too.

[2] This stability is of the same nature, and its exact proof of the same value, as the stability of any other exact system. Of course, it is compatible with a large amount of instability in the actual phenomenon. Part of this instability is unimportant, both for theoretical and for practical purposes; another part, whilst practically important, is yet uninteresting in a discussion of principles; still another, however, has, as we shall see, both practical and theoretical importance. None of these groups of cases affects the fundamental importance of exact proof of stability in the sense meant, as would be obvious everywhere except in economics, where the sterility incident to the prevalence of interest in the "practical problem" has yet to be overcome and where scientific refinement is still an opprobrium. But it must be borne in mind that our arrangement excludes all important cases of determined but unstable equilibrium. For the above argument, therefore, and within our meaning of terms, determinateness spells economic stability under static conditions, although, of course, these two things do not coincide logically and always require separate proof. The shortest way to satisfy oneself on this point is by verifying the statement, that of all cases of equilibrium known to Marshallian analysis, only the stable ones remain—apart from chance equilibria which occur during the process of Walrasian *tâtonnement*—for a static theory as above defined. Correct proof of this stability has not been given so far, but does not seem to meet with any great difficulty.

Just as a child's blood circulation, although going on concurrently with its growth or, say, pathological change in its organs, is yet capable of being singled out and dealt with as a distinct real phenomenon, so that fundamental circular process can be singled out and dealt with as a distinct real phenomenon, and *every analyst* [1] *and every business man does so deal with it*—the latter realising that it is one thing to figure out the outlay on, and the income from, a building in given circumstances and another thing to form an idea about the future prospects of the neighbourhood, or that it is one thing to manage an existing building and another to pull it down and replace it by another of a different kind. Nor is our analogy with the circulation of the blood idle. For the first complete analysis of the static economic process, Quesnay's, was directly inspired by Harvey's discovery. The analytic apparatus or theoretic point of view of statics is presented by the concept of a determined equilibrium, the use of which, however, is not absolutely confined to the explanation of the circular process, as temporary equilibria occur outside of this process.

Because a set of facts, which form a coherent whole and are, in many cases, capable of statistical separation from the rest, corresponds to static theory, the static state is not merely a methodological device, still less a pedagogical one. And its range is much widened by the fact that it is not a state of rest. It is first, of course, no state of absence of motion, as it implies the ever-changing flow of productive services and consumers' goods, although this flow is looked upon as going on under substantially unchanging conditions. But, secondly, conditions need not be entirely constant. We can allow seasonal oscillations. We can also allow, without leaving the precincts of statics, chance variations, provided reaction to them is merely adaptive, in the sense of an adaptation *capable of being brought about by infinitesimal steps*. And we can, finally, deal with the phenomenon of mere growth of population, of capital and, consequent thereupon, of the National Dividend. For these changes occur continuously, and adaptation to them is essentially continuous. They may

[1] Of course, only a minority of economists are aware of the fact. And some of those who are, spoil the edge of the tool by speaking of a "stationary" state. Some of these, again, construct a state of harmonious progress to occupy the ground between "statics" and what too obviously lies outside of it. There is no objection to such a construction. But it is not always recognised that, owing to the fact that it implies consideration of long periods, the "normal," which pertains to it, is much bolder and much more dangerous an abstraction than the static one.

condition discontinuous changes; but they do not, directly and by their mere presence, bring them about. What they do bring about automatically are only variations at the margins.[1] Increase of population, for instance, will, by itself, merely tend to make labour cheaper, and diagnosis of the state of any particular nation in any particular point of time will have to recognise this as a real and distinct element of the situation, however much it may be compensated by other factors. From this it follows that mere growth is not in itself a source of instability of either the System or the Order of Capitalism, within the meaning given to "stability" in this paper. This disposes of some, if not most, theories of "disproportionality," past and present, and gives further help towards "localising" causes of instability.

II. *Stability and Progress*

§ 5. This might very well be all: Economic life, or the economic element in, or aspect of, social life might well be essentially passive and adaptive and *therefore, in itself, essentially stable.* The fact that Reality is full of discontinuous change would be no disproof of this. For such change could without absurdity be explained by influences from without, upsetting equilibria that would, in the absence of such influences, obtain or only shift by small and determined steps along with what we have called continuous growth. We could, of course, even then fit trend lines through the facts succeeding one another historically; but they would merely be expressions of whatever has happened, not of distinct forces or mechanisms; they would be statistical, not theoretical; they would have to be interpreted in terms of particular historic events, such as the opening up of new countries in the nineteenth century, acting on a given rate of growth—and not in terms of the working of an economic mechanism *sui generis.* And if analysis could not detect any purely economic forces within the system making for qualitative and discontinuous change, we

[1] Although, therefore, even these influences do not work within a given state of equilibrium and do not tend towards a given centre of gravitation, but displace this centre and propel the economic organism away from the old position, the static apparatus is admirably competent to deal with them. Treatment of such questions has been called "dynamics" by some authorities, foremost among whom was E. Barone. It would, perhaps, be best to drop the terms statics and dynamics altogether. Certainly they are misnomers, when used in the sense given to them in the text, and care should be taken not to think of them by way of analogy with their meanings in mechanics and not to confuse the different meanings attached to them by different writers. All the different meanings, I suppose, lead back to John Stuart Mill, who owes the suggestion to Comte, who, in his turn, expressed indebtedness to the zoologist de Blainville.

should evidently be driven to this conclusion,[1] which can never lack verification, as there are always outside influences to point to, and as a great part of the facts of non-equilibrium must in any case be explained largely on such lines, whether there be a definite piece of non-static mechanism in them or not.

Now it is always unsafe, and it may often be unfair, to attribute to any given author or group of authors clear-cut views of comprehensive social processes, the diagnosis of which must always rest largely on social vision as distinguished from provable argument. For no author or group of authors can help recognising many heterogeneous elements, and it is always easy to quote passages in proof of this. The treatment of the history of the analysis of value, cost and interest affords examples in point,[2] and it must be left to the reader to form his own opinion about the correctness or otherwise of our thus formulating what seems to us to be received doctrine: Industrial expansion, automatically incident to, and moulded by, general social growth—of which the most important purely economic forces are growth of population and of savings—is the basic fact about economic change or evolution or "progress"; wants and possibilities develop, industry expands in response, and this expansion, carrying automatically in its wake increasing specialisation and environmental facilities,

[1] As a matter of fact, this is what the position of our highest authorities comes to. It is certainly the position of Ricardo and John Stuart Mill, whose discussion of "progress" mainly turns on the question of relative growth of population and capital, occasionally affected by improvement of methods of production, which they glance at in passing as a disturber of the normal course of things. Such is the position, too, of Walras or, for that matter, of Böhm-Bawerk, who both of them seem convinced that everything of a purely economic nature must needs fit into one homogeneous body of doctrine, which is frankly "static" with Walras, whilst Böhm-Bawerk always rejected the static conception precisely because it excludes some things which yet are undoubtedly "purely economic." John B. Clark is the one outstanding exception, but Marshall, although embracing within his wide horizons every one of the elements essential to a distinct theory of "dynamics," still forced all of them into a frame substantially "static." The present writer believes that some of the difficulties and consequent controversies about Prof. Pigou's argument in his *Economics of Welfare* are traceable to the same source, and his work on *Industrial Fluctuations* is a monument to the view that economic life, in itself essentially passive, is being continually disturbed and propelled by "initial impulses" coming from outside.

[2] Even within the narrower precincts of problems such as these, it has become a fashion—a justified reaction, perhaps, from the opposite vice—to interpret older authors so very broadly as to make them "*see*" everything and *definitely say* nothing, and to frown on another way of stating their views as ungenerous. I submit, however, first that whilst this attitude is the correct one in evaluating individual theorists—provided that the same generous broadness be vouchsafed to all—it is not useful in bringing out characteristics; secondly, that mere "recognition" of a fact means nothing unless the fact be welded into the rest of the argument and made to do theoretic work.

accounts for the rest, changing continuously and organically its own *data*.

Grounds for dissent from this view present themselves on several points, but I am anxious to waive objections in order to make stand out *the* objection. Without being untrue, when taken as a proposition summing up economic history over, say, a thousand years,[1] it is inadequate, or even misleading, when meant to be a description of that mechanism of economic life which it is the task of economic theory to explain, and it is no help towards, but a bar to, the understanding of the problems and phenomena incident to that mechanism. For expansion is *no* basic fact, capable of serving in the rôle of a cause, but is itself the result of a more fundamental ' economic force," which accounts both for expansion and the string of consequences emanating from it. This is best seen by splitting up the comprehensive phenomenon of general industrial growth into the expansion of the single industries it consists of. If we do this for the period of predominantly competitive capitalism, we meet indeed at any given time with a class of cases in which both entire industries and single firms are drawn on by demand coming to them from outside and so expanding them automatically; but this additional demand practically always proceeds, as a secondary phenomenon,[2]

[1] Different sets of problems require different distances from the objects of our interest; and different propositions are true from different distances and on different planes of argument. So, *e.g.*, for a certain way of describing historic processes, the presence of a military commander of Napoleonic ability may truly be said to be of causal importance, whilst, for a survey farther removed from details, it may have hardly any importance at all. Our analytic apparatus consists of heterogeneous pieces, every one of which works well on some of the possible " planes " of argument and not at all on others, the overlooking of which is an important, and sometimes the only, source of our controversies.

[2] We may conveniently enumerate, partly anticipating and partly repeating, the more important types of those secondary phenomena, which we hold received opinion, neglecting the primary phenomenon, exclusively deals with, and which would not entirely, but almost entirely, be absent without the primary one.

(1) Expansion of some industries called forth by primary expansion in others, as stated above : If a new concern establishes itself, grocers' businesses will expand in the neighbourhood and so will producers of subsidiary articles. *The expansion of all industries, which do not themselves display any break in their practice during the time under consideration* is to be accounted for thus.

(2) If the primary change results in turning out better tools of production, naturally this will expand the industries which use them. This must be taken account of in judging the comparative success of some State-managed railways surrounded by private industries, which force on them improved engines, fittings, and so on.

(3) Every given change starts from a given environment, and would be impossible without its facilities. But every given environment embodies the results of previous primary change, and, therefore, cannot be taken, except within static theory, as an ultimate datum, acting autonomously, but is itself, in great part, a secondary phenomenon.

from a primary change in some other industry—from textiles first, from iron and steam later, from electricity and chemical industry still later—which does not *follow*, but *creates* expansion. It *first*—and by its initiative—expands its own production, thereby creates an expansion of demand for its own and, contingent thereon, other products, and the general expansion of the environment we observe—increase of population included—is the *result* of it, as may be visualised by taking any one of the outstanding instances of the process, such as the rise of railway transportation. The way by which every one of these changes is brought about lends itself easily to general statement: it is by means of new combinations of existing factors of production, embodied in new plants and, typically, new firms producing either new commodities, or by a new, *i.e.* as yet untried, method, or for a new

(4) So is, in great part, what we have called growth. This is specially clear in the case of saving, the amount of which would be very much smaller in the absence of its most important source, the entrepreneurs' profits. It is also true as to increase of population. And expansion, incident to what would be left of growth in the absence of primary change, would soon be quenched by a (physical) law of decreasing returns acting sharply. *This, then, is the main reason why we think so little of the autonomous—as distinguished from secondary—importance of external economies incident to mere expansion and of what is left of increasing returns*, if we exclude all that is either primarily or secondarily due to the cause we are about to consider.

(5) Industrial evolution inspires collective action in order to force improvement on lethargic strata. Of this kind was, and is, Government action on the Continent for improving agricultural methods of peasants. This is not "secondary" in the sense we mean it, but if it comes to creating external economies by non-economic influence, it has nevertheless been due so far mainly to some previous achievement in some private industry.

(6) Successful primary change is followed by general reorganisation within the same industry, more and more other firms following the lead of some, both because of the profits to be gained and the losses to be feared. During this process, what have at first been the internal economies of the leaders soon become external economies for the rest of the firms, whose behaviour need be no other than one of passive adaptation (and expansion) to what *for them* is environmental advantage. But for us, the observers, to look upon the process as one of adaptation to expanding environment is to miss the salient point.

(7) Incident to all the phenomena glanced at, are, among other things, secondary gains going to all kinds of agents, who do not display any initiative. There is, however, another, a secondary, initiative, stimulated by the possibility of such gains becoming possible—extensions of businesses, speculative transactions and so on, calculated to secure them. The periodic rise and fall of the level of prices—an essential piece, as we shall see, of the mechanism of change in competitive capitalism—carries in its wake extensions and, to finance them, applications for credit merely due to the fact of prices rising, which greatly intensify the phenomenon. And this secondary phenomenon is being as a rule realised much more clearly by observers than the primary phenomenon which gives rise to it.

Our analysis neither overlooks nor denies the importance of these things. On the contrary, it aims at showing their cause and nature. But in a statement of fundamental principles within so short a compass they cannot loom large in the picture.

market, or by buying means of production in a new market. What we, unscientifically, call economic progress means essentially putting productive resources to uses *hitherto untried in practice*, and withdrawing them from the uses they have served so far. This is what we call "innovation."

What matters for the subject of this study is merely the essentially discontinuous character of this process, which does not lend itself to description in terms of a theory of equilibrium. But we may conveniently lead up to this by insisting for the moment on the importance of the difference between this view and what I have called the received one. Innovation, unless it consists in producing, and forcing upon the public, a new commodity, means producing at smaller cost per unit, breaking off the old "supply schedule" and starting on a new one. It is quite immaterial whether this is done by making use of a new invention or not; for, on the one hand, there never has been any time when the store of scientific knowledge had yielded all it could in the way of industrial improvement, and, on the other hand, it is not the knowledge that matters, but the successful solution of the task *sui generis* of putting an untried method into practice—there may be, and often is, no scientific novelty involved at all, and even if it be involved, this does not make any difference to the nature of the process. And we should not only, by insisting on invention, emphasise an irrelevant point—irrelevant to our set of problems, although otherwise, of course, just as relevant as, say, climate—and be thereby led away from the relevant one, but we should also be forced to consider inventions as a case of external economies.[1]

[1] There is another point which arises out of the usual treatment of these things: Nobody can possibly deny the occurrence or relevance of those great breaks in industrial practice which change the data of economic life from time to time. Marshall, therefore, distinguishes these, which he calls "substantive" inventions and which he deals with as chance events acting from outside on the analogy, say, of earthquakes, from inventions which, being of the nature of more obvious applications of known principles, may be expected to arise in consequence of expansion itself. This distinction is insisted upon by Prof. Pigou in the paper quoted above. This view, however, cuts up a homogeneous phenomenon, the elements of which do not differ from one another except by degree, and is readily seen to create a difficulty similar to that of filling the empty boxes. Exactly as the failure to distinguish different processes leads, in the case of the boxes, to a difficulty in distinguishing between groups of facts— and leads, also, to that state of discussion in which some authors hold that most industries display *increasing*, others that most industries display *decreasing*, still others, that normally any industry shows *constant*, returns—so it is obviously impossible to draw any line between those classes of innovations, or, for that matter, inventions; and the difficulty is not one of judging particular cases, but one of principle. For *no* invention is independent of existing data; and *no* invention is *so* dependent on them as to be automatically produced by them. In the case of important invention, change in data is great; in the case of unimportant invention it is small. But this is all, and the *nature* of the process and of the special mechanism set in motion is always the same.

Now this hides part of the very essence of the capitalist process. This kind of external economies—and, in fact, nearly every kind, even the trade journal must, unless the product of collective action, be somebody's business—characteristically comes about by first being taken up by one firm or a few—by acting, that is, as an internal economy. This firm begins to undersell the others, part of which are thereby definitely pushed into the background to linger there on accumulated reserves and quasi-rents, whilst another part copies the methods of the disturber of the peace. *That* this is so, we can see every day by looking at industrial life; it is precisely what goes on, what is missing in the static apparatus and what accounts both for dissatisfaction with it and for the attempts to force such phenomena into its cracking frame—instead of, as we think it natural to do, recognising and explaining this as a distinct process going on along with the one handled by the static theory. *Why* this is so, is a question which it would lead very far to answer satisfactorily. Successful innovation is, as said before, a task *sui generis*. It is a feat not of intellect, but of will. It is a special case of the social phenomenon of leadership.[1] Its difficulty consisting in the resistances and un-

[1] This does not imply any glorification. Leadership itself does not mean only such aptitudes as would generally command admiration, implying, as it does, narrowness of outlook in any but one direction and a kind of force which sometimes it may be hardly possible to distinguish from callousness. But economic leadership has, besides, nothing of the glamour some other kinds of leadership have. Its intellectual implications may be trivial; wide sympathies, personal appeal, rhetorical sublimation of motives and acts count for little in it; and although not without its romance, it is in the main highly unromantic, so that any craving for personal hero-worship can hardly hope for satisfaction where, among, to be sure, other types, we meet with slave-trading and brandy-producing puritans at the historic threshold of the subject.

Apart from this source of possible objections, there is a much more serious one in the mind of every well-trained economist, whom experience has taught to think little of such intrusions into theory of views savouring of sociology, and who is prone to associate any such things with a certain class of objections to received doctrine, which continually turn up however often they may have been refuted—sublimely ignorant of the fact—such as objections to the economic man, to marginal analysis, to the use of the barter hypothesis and so on. The reader may, I think, satisfy himself that no want of theoretic training is responsible for statements which I believe to tally fundamentally with Marshallian analysis.

No difficulty whatever arises as to verification. That new commodities or new qualities *or new quantities* of commodities are forced upon the public by the initiative of entrepreneurs—which, of course, does not affect the rôle of demand within the static process—is a fact of common experience; that one firm or a small group of firms leads in the sense meant above, in the process of innovation, thereby creating its own market and giving impulse to the environment generally, is equally patent (and we do not deny facts of other complexion—the secondary or "consequential" ones); and all we are trying to do is to fit the analytic apparatus to take account of such facts without putting its other parts out of gear.

certainties incident to doing what has not been done before, it is accessible for, and appeals to, only a distinct type which is rare. Whilst differences in aptitude for the routine work of "static" management only result in differences of success in doing what every one does, differences in this particular aptitude result in only some being able to do this particular thing at all. To overcome these difficulties incident to change of practice is the function characteristic of the entrepreneur.

Now if this process meant no more than one of many classes of "friction," it certainly would not be worth our while to dissent from the usual exposition on that account, however many facts might come under this heading. But it means more than this: Its analysis yields the explanation of phenomena which cannot be accounted for without it. There is, first, the "entrepreneurial" function as distinct from the mere "managerial" function—although they may, and mostly must, meet one another in the same individual—the nature of which only shows up within the process of innovation. There is, secondly, the explanation of entrepreneurs' gain, which emerges in this process and otherwise gets lost in the compound of "earnings of management,"[1] the treating of which as a homogeneous whole is unsatisfactory for precisely the same reason which, by universal consent, makes it unsatisfactory so to treat, say, the income of a peasant tilling his own soil, instead of treating it as a sum of wages, rent, quasi-rent and, possibly, interest. Furthermore, it is *this* entrepreneurs' profit which is the primary source of industrial fortunes, the history of every one of which consists of, or leads back to, successful acts of innovation.[2] And as the rise and

[1] The function in question being a distinct one, it does not matter that it appears in practice rarely, if ever, by itself. And whoever cares to observe the behaviour of business men at close quarters will not raise the objection that new things and routine work are done, as a rule, indiscriminately by the same manager. He will find that routine work is done with a smoothness wholly absent as soon as a new step is to be taken, and that there is a sharp cleavage between the two, insuperable for a very worthy type of manager. This extends far into the realm of what we are wont to consider as automatic change, bringing about external economies and increasing returns. Take the instance of a business letting out motor cars on the principle "drive yourself." A mere growth of the neighbourhood, sufficient to make such a business profitable, does not produce it. Someone has to realise the possibility and to found the firm, to get people to appreciate its services, to get the right type of cars and so on. This implies solution of a legion of small problems. Even if such a firm already exists and further environmental growth make discontinuous extension feasible, the thing to be done is not so easy as it looks. It would be easy for the trained mind of a leading industrialist, but it is not so for a typical member of the stratum which does such business.

[2] It is, as has been said in a previous note, not the *running* of a business according to new plan, but the act of *getting it* to run on a new plan, which accounts

decay of industrial fortunes is *the* essential fact about the social structure of capitalist society, both the emergence of what is, in any single instance, an essentially temporary gain, and the elimination of it by the working of the competitive mechanism, obviously are more than " frictional " phenomena, as is that process of underselling by which industrial progress comes about in capitalist society and by which its achievements result in higher real incomes all round.

Nor is this all. This process of innovation in industry by the agency of entrepreneurs supplies the key to all the phenomena of capital and credit. The rôle of credit would be a technical and a subordinate one in the sense that everything fundamental about the economic process could be explained in terms of goods, if industry grew by small steps along coherent curves. For in that case financing could and would be done substantially by means of the current gross revenue, and only small discrepancies would need to be smoothed. If we simplify by assuming that the whole circular process of production and consumption takes exactly one period of account, no instruments or consumers' goods surviving into the next, capital—defined as a monetary concept—and income would be exactly equal, and only different phases of one and the same monetary stream. As, however, innovation, being discontinuous and involving considerable change and being, in competitive capitalism, typically embodied in new firms, requires large expenditure previous to the emergence of any revenue, credit becomes an essential element of the process. And we cannot turn to savings in order to account for the existence of a fund from which these credits are to flow. For this would imply the existence of previous profits, without which there would not be anything like the required amount—even as it is, savings usually lag behind requirements—and assuming previous profits would mean, in an explanation of principles, circular reasoning. "Credit-creation," therefore, becomes an essential part both of the mechanism of the process and of the theory explaining it.

for entrepreneurs' profits, and makes it so undesirable to try to express them by " static " curves, which describe precisely the phenomena of the " running " of it. The theoretical reason for our proposition is, that either competition or the process of imputation must put a stop to any " surplus " gain, even in a case of monopoly, in which the value of the patent, the natural agent or of whatever else the monopoly position is contingent on, will absorb the return in the sense that it will no longer be profit. But there is also a " practical " observation to support this view. No firm ever yields returns indefinitely, if only run according to unchanged plan. For everyone comes the day when it will cease to do so. And we all of us know that type of industrial family firm of the third generation which is on the road to that state, however conscientiously it may be " managed."

Hence, saving, properly so called, turns out to be of less importance than the received doctrine implies, for which the continuous growth of saving—accumulation—is a mainstay of explanation. Credit-creation is the method by which the putting to new uses of existing means of production is brought about through a rise in price enforcing the "saving" of the necessary amount of them out of the uses they hitherto served ("enforced savings"—cp. Mr. Robertson's "imposed lacking").

Finally, it cannot be said that whilst all this applies to individual firms, the development of whole industries might still be looked at as a continuous process, a comprehensive view "ironing out" the discontinuities which occur in every single case. Even then individual discontinuities would be the carriers of essential phenomena. But, besides, for a definite reason that is not so. As shown both by the typical rise of general prices and the equally typical activity of the constructional trades in the prosperity phase of the business cycle, innovations cluster densely together. So densely, in fact, that the resultant disturbance produces a distinct period of adjustment—which precisely is what the depression phase of the business cycle consists in. *Why* this should be so, the present writer has attempted to show elsewhere.[1] *That* it is so, is the best single verification and justification of the view submitted, whether we apply the criterion of its being "true to life" or the criterion of its yielding explanation of a phenomena *not itself implied in its fundamental principle.*

If, then, the putting to new uses of existing resources is what "progress" fundamentally consists in; if it is the nature of the entrepreneur's function to act as the propelling force of the process; if entrepreneur's profits, credit, and the cycle prove to be essential parts of its mechanism—the writer even believes this to be

[1] "Theorie der wirtschaftlichen Entwicklung," 1911, 2nd ed. 1926. Cp. also "The Explanation of the Business Cycle," *Economica*, 1927. The failure of the price-level to rise in the United States during the period 1923–1926 will be seen to be no objection but a further verification of this theory. It has, however, been pointed out to the writer, by a very high authority, that prices did also fail to rise in the United States in the prosperity immediately preceding the War. It could be replied that the factors which account for the stability 1923–1926 had been active already before the War. But the U.S. Bureau of Labour figures for 1908–1913 are 91, 97, 99, 95, 101, 100. Cp. also Prof. Persons' chart in *Review of Economic Statistics*, Jan. 1927. It may be well to mention that constructional trades and their materials need not necessarily show their activity fully by *every* index. Iron, *e.g.*, being an international commodity, need not rise in price if the phases of the cycle do not quite coincide in different countries. As a matter of fact, they generally do. But the right way to deal with iron and steel is to use the Spiethoff index (production + imports − exports), and this has, so far, always worked satisfactorily.

true of interest—then industrial expansion *per se* is better described as a consequence than as a cause; and we should be inclined to turn the other way round what we have termed the received chain of causation. In this case, and as those phenomena link up so as to form a coherent and self-contained logical whole, it is obviously conducive to clearness to bring them out boldly; to relegate to one distinct body of doctrine the concept of equilibrium, the continuous curves and small marginal variations, all of which, in their turn, link up with the circuit flow of economic routine under constant data; and to build, alongside of this, and *before* taking account of the full complexity of the "real" phenomenon—secondary waves, chance occurrences, "growth" and so on—a theory of capitalist change, assuming, in so doing, that non-economic conditions or data are constant and automatic and gradual change in economic conditions is absent. But there is no difficulty in inserting all this. And it would seem to follow that the organic analogy is less adapted to express faithfully the nature of the process than many of us think; although, of course, being a mere analogy, it may be so interpreted as not to imply anything positively wrong and as to avoid the idea of an equilibrium growth *ad instar* of the growth of a tree, which it may, but need not necessarily, suggest.

Summing up the argument and applying it to the subject in hand, we see that there is, indeed, one element in the capitalist process, embodied in the type and function of the entrepreneur, which will, *by its mere working and from within*—in the absence of all outside impulses or disturbances and even of "growth"—destroy any equilibrium that may have established itself or been in process of being established; that the action of that element is not amenable to description by means of infinitesimal steps; and that it produces the cyclical "waves" which are essentially the form "progress" takes in competitive capitalism and could be discovered by the theory of it, if we did not know of them by experience. But by a mechanism at work in, and explaining the features of, periods of depression, a new equilibrium always emerges, or tends to emerge, which absorbs the results of innovation carried out in the preceding periods of prosperity. The new elements find their equilibrium proportions; the old ones adapt themselves or drop out; incomes are rearranged; prosperity inflation is corrected by automatic self-deflation through the repayment of credits out of profits, through the new consumers' goods entering the markets and through saving stepping into the place of "created" credits. So the instabilities, which arise from

the process of innovation, tend to right themselves, and do not go on accumulating. And we may phrase the result we reach in our terminology by saying that there is, though instability of the *System*, no economic instability of the *Order*.

§ 6. The instability due to what we conceive to be the basic factor of purely economic change is, however, of very different importance in the two historic types of capitalism, which we have distinguished.

Innovation in competitive capitalism is typically embodied in the foundation of new firms—the main lever, in fact, of the rise of industrial families; improvement is forced on the whole branch by the processes of underselling and of withdrawing from them their means of production, workmen and so on shifting to the new firms; all of which not only means a large amount of disturbance as an incident, but is also effective in bringing about the result, and to change " internal " economies into " external " ones, only *as far as* it means disturbance. The new processes do not, and generally cannot, evolve out of the old firms, but place themselves side by side with them and attack them. Furthermore, for a firm of comparatively small size, which is no power on the money market and cannot afford scientific departments or experimental production and so on, innovation in commercial or technical practice is an extremely risky and difficult thing, requiring supernormal energy and courage to embark upon. But as soon as the success is before everyone's eyes, everything is made very much easier by this very fact. It can now, with much-diminished difficulty, be copied, even improved upon, and a whole crowd invariably does copy it—which accounts for the leaps and bounds of progress as well as for setbacks, carrying in their wake not only the primary disturbance, inherent to the process, but a whole string of secondary ones and *possibilities*, although no more than possibilities, of recurrent catastrophes or crises.

All this is different in " trustified " capitalism. Innovation is, in this case, not any more embodied *typically* in new firms, but goes on, within the big units now existing, largely independently of individual persons. It meets with much less friction, as failure in any particular case loses its dangers, and tends to be carried out as a matter of course on the advice of specialists. Conscious policy towards demand and taking a long-time view towards investment becomes possible. Although credit creation still plays a rôle, both the power to accumulate reserves and the direct access to the money market tend to reduce the importance of this element in the life of a trust—which, incidentally, accounts

for the phenomenon of prosperity coexisting with stable, or nearly stable, prices which we have had the opportunity of witnessing in the United States 1923–1926. It is easy to see that the three causes alluded to, whilst they accentuated the waves in competitive, must tend to soften them down in trustified, capitalism. Progress becomes "automatised," increasingly impersonal and decreasingly a matter of leadership and individual initiative. This amounts to a fundamental change in many respects, some of which reach far out of the sphere of things economic. It means the passing out of existence of a system of selection of leaders which had the unique characteristic that success in *rising* to a position and success in *filling* it were essentially the same thing—as were success of the firm and success of the man in charge—and its being replaced by another more akin to the principles of appointment or election, which characteristically divorce success of the concern from success of the man, and call, just as political elections do, for aptitudes in a candidate for, say, the presidency of a combine, which have little to do with the aptitudes of a good president. There is an Italian saying, "Who enters the conclave as prospective pope, will leave it as a cardinal," which well expresses what we mean. The types which rise, and the types which are kept under, in a trustified society are different from what they are in a competitive society, and the change is spreading rapidly to motives, stimuli and styles of life. For our purpose, however, it is sufficient to recognise that the only fundamental cause of instability inherent to the capitalist system is losing in importance as time goes on, and may even be expected to disappear.

§ 7. Instead of summing up a very fragmentary argument, I wish to emphasise once more, in concluding, that no account whatsoever has been taken of any but purely economic facts and problems. Our diagnosis is, therefore, no more sufficient as a basis for prediction than a doctor's diagnosis to the effect that a man has no cancer is a sufficient basis for the prediction that he will go on living indefinitely. Capitalism is, on the contrary, in so obvious a process of transformation into something else, that it is not the fact, but only the interpretation of this fact, about which it is possible to disagree. Towards this interpretation I have wished to contribute a negative result. But it may be well, in order to avoid misunderstanding, to state expressly what I believe would be the positive result of a more ambitious diagnostic venture, if I may presume to do so in one short and imperfect sentence: Capitalism, whilst economically stable, and even gaining

in stability, creates, by rationalising the human mind, a mentality and a style of life incompatible with its own fundamental conditions, motives and social institutions, and will be changed, although not by economic necessity and probably even at some sacrifice of economic welfare, into an order of things which it will be merely matter of taste and terminology to call Socialism or not.

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THE REPRESENTATIVE FIRM

I

THE Marshallian conception of a Representative Firm has always been a somewhat unsubstantial notion. Conceived as an afterthought—so far as I am able to discover it does not figure at all in the first edition of the *Principles*—it lurks in the obscurer corners of Book V like some pale visitant from the world of the unborn waiting in vain for the comforts of complete tangibility. Mr. Keynes has remarked that, " this is the quarter in which in my opinion the Marshall analysis is least complete and satisfactory and where there remains most to do," [1] and others have not been lacking to express similar opinions.[2] Marshall himself makes singularly little use of the notion in other writings and, save in one or two instances,[3] it does not appear to have been used much since his day. Nevertheless, as is the way with ghosts, it bids fair to outlast many more virile creations. Not offering the same surface for attack, it tends to pass notice, though continuing indirectly to influence thought, and even to raise up for itself more earthy and tangible descendants. In certain recent discussions of applied economics in particular, its influence has been discernible. For this reason, and for the sake of the intrinsic interest of anything suggested by Marshall,[4] it seems worth while trying to examine it further.

[1] ECONOMIC JOURNAL, 1924, p. 351.

[2] *E.g.*, Davenport, *Value and Distribution*, pp. 374–378.

[3] This paper was written and set up before the publication, in the last number of this Journal, of Professor Pigou's *Analysis of Supply*. It does not contain, therefore, any comment on the use there made of the almost identical concept of the Equilibrium Firm, but I venture to express the hope that the observations I have made upon Marshall's own construction will not be found to be wholly inapplicable to this interesting and important variation.

[4] Is it necessary at this stage to make more explicit the inevitable deference of all serious economists, I wonder? Perhaps it is, for in certain quarters there seems to have arisen a strange myth, which I for one should like publicly to repudiate, that economists of the tradition in which I was trained have a secret grudge against Cambridge and all things Marshallian. In fact, of course, nothing could be more ridiculous. In the friendly rivalry of two great centres of study it is natural that controversy should occasionally arise and that good-humoured gibes should be given and taken. But what London man, sensible of his own debts and alive to the massive contribution of Marshall and his successors, will not willingly yield pride of place to the great fountain head of so much that is most vital and significant in modern economics?

II

Let us first try to get a clear idea of matters as they presented themselves to Marshall.

The first appearance of the concept is in the last chapter of Book IV of the *Principles*—the Book which deals with the agents of production. The chapter is headed "Correlation of the Tendencies to Increasing and Diminishing Return." Marshall opens the discussion by recalling the doctrine of internal and external economics. He indicates certain limits to the former and dwells again on the importance of the latter. In the first edition he then contents himself with saying that "these results will be of great importance" when the supply price of a commodity is studied, and that although new producers of any commodity may labour under special difficulties, "the general rule is the other way" and "extra produce will commonly be got by increasing the output of businesses already established at a less than proportionate cost of extra labour and sacrifice." [1] In the second and subsequent editions, however, the wording is changed.[2] After announcing the importance of what has gone before in relation to the study of supply prices, Marshall goes on to state: "We shall have to analyse carefully the normal cost of producing a commodity relatively to a given aggregate of production; and for this purpose we shall have to study the expenses of a Representative Producer for that aggregate volume. On the one hand we shall not want to select some new producer just struggling into business, who works under many disadvantages and has to be content for a time with little or no profit, but who is satisfied with the fact that he is establishing a connection and taking the first steps towards building up a successful business; [3] nor on the other hand shall we want to take a firm which by exceptionally long-sustained ability and good fortune has got together a vast business and huge, well-ordered workshops that give it a superiority over all its rivals. But our representative firm must be one which has had a fairly long life and fair success, which is managed with normal ability, and which has normal access to the

[1] *Principles*, 1st ed., p. 378.

[2] The change was obviously the result of the changes in the parts of Book V dealing with the notion of increasing returns under competitive conditions. It would be interesting if some pupil of Marshall's could supply an exact history of these changes.

[3] It is interesting to observe that when he comes to study the subject in question this is precisely what he does, safeguarding himself only by depicting the producer as asking whether in time he may hope to become representative.

economics, external and internal, which belong to that aggregate volume of production: account being taken of the class of goods produced, the conditions of marketing them, and the economic environment generally." [1]

This is the clearest and fullest definition of the concept. When Marshall refers to it again, he always speaks of it as something which has already been made clear—a plan whose nature has been explained fully in other connections.[2] Nevertheless, by piecing together stray pronouncements, it is possible to add a little precision to the notion.

(1) In the first place, it is clear that it is an economic rather than a legal concept. That is to say, when Marshall speaks of a firm, he has in mind a productive unit of one kind or another. He is not referring merely to a particular legal form of business association—the old-fashioned private partnership or the one-man business. This emerges quite clearly in a passage in *Industry and Trade*, in which he says very definitely that whereas until recently the representative firm was a private partnership, now "joint stock control has become . . . general even in regard to manufacturing and other industries." [3] And in the *Principles* in one place he commences a discussion with the remark, "We may select as representative a firm whether in private or joint stock management." [4] This, I think, is quite clear; although of course it is not so clear that with this change in the organisation of industry the conception retains its suitability for the purpose for which it was devised. If we read between the lines, indeed, we find signs that Marshall himself was troubled about this.[5]

(2) But while we are on firm ground in concentrating attention on economic organisation as such rather than upon particular legal forms of such organisation, it is not so easy to say whether Marshall was thinking of a representative plant or technical production unit or a representative business organisation. In the *Principles* he gives the impression of referring to the latter. For instance, speaking of the cost of building up a trade connection, he depicts the "alert entrepreneur" asking himself whether his undertaking has a fair chance of becoming representative,

[1] *Principles*, 2nd ed., p. 375, 8th ed., p. 317.

[2] As, for instance, on pp. 342 and 396. The qualifications with which the term is accompanied are nearly always a mere verbal paraphrase of the passage just quoted.

[3] *Industry and Trade*, p. 314.

[4] *Principles*, 8th ed., p. 318.

[5] E.g. *Industry and Trade*, p. 316, and *Principles*, p. 310. These and the references that follow are taken from the 4th ed. of *Industry and Trade* and the 8th ed. of the *Principles*.

saying that the investment of capital in a trade " is . . . governed by estimates on the one hand of the outgoings required to build up and work such a representative firm, and on the other of the incomings spread over a long period of time " [1] to be got by the price estimated to be normal. But against this must be put a passage in *Industry and Trade*, in which he distinctly asserts that the establishment or plant best suggests the " command possessed of the economics of *production*. Economics of marketing are often better represented by statistics of businesses, but on the whole the establishment is doubtless the best unit." [2] This assertion, however, occurs in the course of an analysis of the statistics of the American Census of Production, and may be regarded, perhaps, as special pleading for his data. On the whole, although it would be hard to contend that Marshall was always very clear on this subject, the main drift of his argument, I suggest, points to the business rather than to the establishment as the representative unit.

(3) Finally we may inquire into the relation of this conception to the statistical conception of an average. Is the representative firm to be conceived as a mere average, to be established by applying one or other of the recognised statistical methods to the analysis of any given set of business statistics? On this point, fortunately, Marshall is fairly explicit. It is not an average of this sort. A given set of business statistics will exhibit the results of both short-period and long-period influences, and the representative firm is essentially a long-period conception. Thus, if we like we may regard it as an average firm, but we must regard it as *an average which would only emerge arithmetically under conditions when all present tendencies to change had reached a state of equilibrium*. In no other way can it be regarded as being statistically established.[3] This fact has a double significance. On the one hand, it seems to render irrelevant all objections to the appropriateness of the conception based on an examination of statistics of actual businesses. Mr. Keynes, for instance, discussing Mr. Coates' very interesting analysis of business profits, suggests that the magnitude of the dispersion is such as " to do some damage to the conception." [4] If the foregoing analysis is correct, I am disposed to agree with Mr. Robertson that Marshall would not have been of this opinion.[5] On the other hand, it cuts equally against the practical usefulness of the notion. If

[1] *Principles*, pp. 377-8.

[2] *Industry and Trade*, p. 847.

[3] See *Principles*, p. 318.

[4] ECONOMIC JOURNAL, 1927, p. 205.

[5] *Ibid.*, p. 571.

the averages obtainable from statistics are not admissible, then the prospect of simplifying the analysis of supply by this method becomes illusory. To those of us who do not possess the childlike faith in unaided statistical induction now prevalent in many quarters, this will not be a great disappointment if the conception can be proved to be theoretically useful in facilitating the comprehension of general relations. But since it seems probable that in this instance Marshall's main intention in devising this plan was the simplification of practical inquiry, it must be admitted that its *raison d'être* is considerably weakened by these considerations.

III

Such then is the Representative Firm as conceived by Marshall: a long-period average business unit, representative of the organisation of a given line of production. It is now time to ask for what purposes he devised the conception and to what extent it is suited for these purposes.

Fortunately, on this point there is little need for conjecture. The interesting and important article on *The Colwyn Report, the Income Tax and the Price Level* by Mr. Robertson [1] contains a pronouncement on that point which we may regard as authoritative. It was devised, according to Mr. Robertson, to meet the difficulties occurring in the analysis of supply when there is a disparity of efficiency as between different producers.[2] This harmonises so well with what hints we are able to glean from Marshall [3] that it would be otiose to make further inquiries. The way is therefore clear for us to ask, further, to what extent the conception is appropriate for the purpose for which it was devised.

Before we can do this, however, it is necessary to make plain

[1] ECONOMIC JOURNAL, 1927, p. 566 *seq.*

[2] Mr. Robertson's pronouncement is so relevant to the whole of what follows that I venture to transcribe it in full. It occurs in the course of an analysis of Mr. Coates' contention that owing to this disparity net profits have no influence on price. "In real life," says Mr. Robertson, attempting to paraphrase this contention, "production is in the hands of numerous producers of very varying strength and ability, some of whom are so weak that they are making no profits, or even meeting losses. The goods supplied by these producers form part of the total supply of goods by the magnitude of which, taken in conjunction with the conditions of demand, price is determined. Therefore (so the argument appears to run), the magnitude of net profits is irrelevant to the determination of that price.

"It is precisely this type of argument that Marshall's conception of the Representative Firm was designed, as it seems to me, to forestall." *Ibid.* pp. 570–1.

[3] *E.g.* the passage quoted above. See also *Principles*, p. 342 *seq.*

one distinction. The disparities of efficiency as between different producing units in any given industry, to which Mr. Robertson refers, may be due to two analytically separable sets of conditions. Either they may be due to what are, for the period under consideration, ultimate deficiencies of productive factors of the highest order of efficiency—the best lands, the best managers, the best equipment, etc.—deficiencies which theoretically would make themselves felt were all transitory disturbances of tendencies to change absent; or they may arise as phenomena of maladjustment, when changes in demand or the ultimate conditions of supply are necessitating a new equilibrium. If we follow the generally accepted terminology, we may call the former static, the latter dynamic disparities. The former are the disparities which would appear in any given productive situation were all causes of further change to cease. The latter are disparities which emerge as a result of changes in the given productive situation. In real life, of course, the two are almost inextricably entangled; but unless we are willing to resign ourselves to the nirvana of purposeless observation, this does not render it any less desirable to distinguish them for purposes of analysis. In the following examination of the suitability of the Marshallian doctrine I shall endeavour so to distinguish them.

I turn first to what I have called static disparities and the general problem of economic equilibrium. The elements of the problem are simple. Within the various groups of factors of production employed in any branch of industry the constituent factors are unequal in efficiency. There are not enough lands of the first order of quality, there are not enough managers of the first order of ability, there are not enough workmen of the first order of efficiency, to go round. Recourse is therefore had to factors of inferior efficiency. Demand and the ultimate supplies of all kinds of factors remain constant. What are the conditions of equilibrium?

Now if these disparities were not present, if all lands were of equal quality, all managers of equal ability, all workmen of equal efficiency, within their different grades, we should all be agreed as to the answer to this question. Equilibrium would be reached when the net advantages reaped by the employment of any factor in one line of production were at least as great as the net advantages to be reaped by employment in any other line of production; and if we assume that there is only one kind of land, one kind of worker, one kind of entrepreneur, and that the different lines of industry offer equal attractions other than

monetary remuneration, then we should conclude that when equilibrium is attained all rents will be equal, all wages will be equal, and—what is more significant from our point of view—the profits of different firms will be equal.

On this point I think there would be general agreement. We might justly question whether such a state of things was possible, either as regards homogeneity of factors or as regards the attainment of final adjustment, but such objections, though valid enough if there were any disposition to accept the hypothesis as a counterpart of reality, would be irrelevant from the point of view of this argument. The important point is that, in the circumstances assumed, such would be the conditions of equilibrium.

But now let us waive the condition of homogeneity of factor efficiency. Let us permit differences of quality of land, differences of ability of entrepreneurs, differences of efficiency of different kinds of workmen, to enter our hypothesis. Under such conditions is it necessary to modify or to complicate the formula for equilibrium?

Surely the answer is, no it is not in any way necessary. So far as land differentials are concerned, the rent analysis has long shown how competition adjusts the return to different prices of land according to their differential of quality. It is easy, as Marshall himself has shown, to take account of the differing efficiency of wage-earners.[1] Why then, when we come to deal with long-period profit doctrine and the differences of managerial and business ability, should we find it necessary to consider a firm, an entrepreneur, of average or typical efficiency? Just as units of a given supply may be produced on lands of varying efficiency, so their production may be supervised by business men of varying ability. What is normal profit for one will not be normal profit for another, that is all. *There is no more need for us to assume a representative firm or representative producer, than there is for us to assume a representative piece of land,*[2] *a representative machine, or a representative worker.* All that is necessary for equilibrium to prevail is that each factor shall get at least as much in one line of production as it could get in any other: as much, of course, including all advantages and disadvantages of work, hiring or investment.

At this point it is perhaps desirable to remove a possible

[1] *Principles*, p. 547.

[2] Strangely enough, this has actually been done by Cairnes in his essay on *Political Economy and Land* (*Essays in Political Economy*, pp. 187–231). But the results there achieved are not such as to recommend the general adoption of the notion.

cause of misapprehension. This formula of equilibrium does *not* imply that ability below a certain level will find remunerative employment in managerial positions in any line of industry. It is sometimes thought that this theory of unequal normal profits implies that any firm of whatever efficiency can get along somehow, even in the long-time equilibrium adjustment. This is a complete mistake, due to a failure to perceive the true nature of the competitive process assumed to be at work under such hypothetical conditions. Of course, if, following Professor Pigou's conception of negative wages,[1] we are willing to contemplate *negative profits* of *any* dimensions, then theoretically we can conceive the absorption of any number of entrepreneurs of any degree of inefficiency in any given industry. But such an abstraction is neither useful nor necessary at this juncture.[2] A glance at the theory of land rents is much more illuminating. Just as under ideal competition the various bits of land are sorted out into *different* uses according to their respective qualities, so, under the conditions we are assuming, human factors of production are sorted out according to their efficiency, not only horizontally as between different industries, but also vertically as between productive grades. If a man is extra-marginal as an entrepreneur, he will find employment as a manual labourer or as a salaried official. The doctrine of unequal normal profits no more implies that we are likely to find half-wits or incompetents at the head of businesses than the doctrine of unequal normal rents implies that we are likely to find the wilds of Nova Scotia used as the sites of multiple shops.

For all this, of course, there is abundant confirmation in Marshall's own analysis. I have referred above to the passage in which he shows that "competition tends to make the earnings got by two individuals of unequal efficiency in any given time not equal but unequal."[3] If we turn to his treatment of what he calls the law of substitution, we find an even more pregnant allusion to the way in which "society substitutes one undertaker for another who is less efficient *in proportion to his charges*"[4] (my italics)—a perfectly satisfactory account of the conditions of equilibrium which makes, not equal efficiency, but factors rewarded proportionately to efficiency, the ultimate

[1] *Industrial Fluctuations*, p. 284. Needless to say, my comments on the use of such a conception in this connection imply no strictures of the illuminating uses to which it is put by Professor Pigou in another context.

[2] It may be remarked, however, that it is by no means so fantastic as at first sight it may appear, in the case of "gentleman farming" and similar hobbies.

[3] *Principles*, p. 547.

[4] *Ibid.*, p. 341.

product of the competitive process. All of which makes it all the more surprising when, a few pages further on, we find him reverting to the man of "normal capacity" asking himself whether, if he sets up in a certain line of business, he may hope that in time his concern may become representative. The necessity for such a complication is certainly not obvious.

But now it is necessary to forestall a possible criticism. It is all very well, it may be urged, to discuss equilibrium in terms of these rigid assumptions, but it is not fair to Marshall to judge his conceptions on this plane of analysis. For Marshall, as is notorious, would not admit the ultimate severity of the static assumptions. Either for fear of becoming unintelligible to business men and economic historians, or because of his curious predilection for biological analogies he always shirked these heroic abstractions.[1] And in this particular connection, it is true, he went out of his way to reject the desirability of such an hypothesis. "Of course," he says, "we might assume that in our stationary state every business remained always of the same size and with the same trade connection. But we need not go as far as that: it will suffice to suppose that firms rise and fall, but that the 'representative' firm remains always of the same size as does the representative tree of a virgin forest, and that therefore the economies resulting from its own resources are constant, and since the aggregate volume of production is constant, so also are those economies resulting from subsidiary industries in the neighbourhood."[2] All this may be admitted. No doubt it is true that as, one by one, we remove artificialities from our assumptions it is important that we should take account of the fact that, even in conditions where population is stationary, where capital is constant, where demand is unchanging, and where no technical changes are taking place, that individuals and machines will appreciate and depreciate with the passage of time, and that particular firms will wax and wane in prosperity like the "trees of the forest" which Marshall was so fond of introducing. But this necessitates no modification in our general conception of equilibrium. All that is necessary for equilibrium to persist is that at every particular moment producers shall be getting as much where they are as they can get elsewhere—the "as much" including the other advantage or disadvantage of good or bad times to come in the future.

But still, it may be objected, this was not what Marshall had

[1] See the very interesting letter to J. B. Clark in *Memorials*, p. 415.
[2] *Principles*, p. 367.

in mind in the passage we have examined. The ultimate object of this assumption of the stationary state, as we know, was to exhibit the influence of cost upon values.[1] What Marshall was here discussing in other words was not the conditions of equilibrium, but the conditions of "stationariness" as a preliminary to examining the influence of cost upon value under stationary conditions. Of course this is true, but it gives no support to the conception we are discussing. The idea of a representative firm is even less essential to the hypothesis of "stationariness" than to the hypothesis of equilibrium. If demand is unchanging, if technique is unaltered, and if the ultimate supply of all factors of production remains of the same dimensions, *then if we believe in economic determinateness at all, it is totally superfluous to add that the average size of firms in different industries will remain the same.* It may be suggested that if Marshall had considered the conditions of "stationariness" in the sense just indicated (which, of course, makes complete allowance for the kind of change he was contemplating [2]), he would never have found it necessary to introduce the representative firm at this juncture. As it was, approaching the conception not from the point of view of the productive situation as a whole, as Davenport calls it, but from the point of view of one line of production at a time, *he was led to define "stationariness" in terms of the constancy of his various averages.* With great deference, I submit that this is a clumsy and unnecessary expedient, and one which may give rise to false ideas of the ultimate processes of causation involved.

Nor is the necessity of the conception any more apparent when we come to deal with problems of dynamic change, changes in demand, changes in technique, changes in the ultimate supplies of different factors of production. Here new disparities of efficiency emerge. Owing to the changes assumed, some factors and combinations of factors are no longer as comparatively efficient in one line of industry as they were, and it is necessary that they should go elsewhere.[3] We now approach the equilibrium problem from a rather different angle. Granted, that is to say, that the old equilibrium prices are no longer appropriate, how long will disequilibrium persist? When will these disparities disappear? But again no recourse to the conception of a long-period average seems called for. Disequilibrium will persist,

[1] This must not be taken to imply that in the writer's estimation Marshall was successful in achieving this object.

[2] Just as when we assume that population is constant, we do not exclude births and deaths.

[3] On all this see Davenport, *Economics of Enterprise*, pp. 64 and 77–83.

and transfer of productive factors will occur, until once more each factor is receiving as much in the shape of net advantages where it is as it could hope to get elsewhere. Or, to put the same thing another way, if any group of factors is receiving more in one line than similar factors are getting elsewhere, there will be a tendency to transfer to that line; if it is receiving less, there will be a tendency for some to transfer elsewhere. I confess that I find it hard to see the necessity for invoking the conception of an average combination of productive factors in this connection. If, to take perhaps the simplest example, owing to a shift in the conditions of demand, an industry is under the necessity of expanding or contracting, there is surely nothing in the nature of things which would lead us to expect that the factors which are transferred are all of the same efficiency, and nothing in the requirements of pure equilibrium theory to necessitate the assumption that they are.

So much for general equilibrium theory. So far the necessity for the representative firm has not been in any way apparent. But what about what Pareto has called the theory of *partial equilibria*, the examination of particular cases of value, with which, as we know, the main detail of Book V is concerned?

I confess that here, too, the conception appears to me superfluous. The intersecting curves of supply and demand, which are the main apparatus of this mode of analysis, are capable of construction without resort to this instrument. Putting aside the objections of the equilibrium theorists to the whole assumption that other things remain equal, there is no difficulty in *conceiving* a supply schedule showing variations in amount offered in response to price changes. Marshall seems to have thought that by concentrating on the supply schedule of his representative firm, this conception might be further simplified. But this hope appears to be illusory. In the first place, as has been shown above, no *practical* simplification is involved. The representative firm is not the short-period average. And secondly, and much more important from our point of view, no theoretical simplification which is not misleading is involved. If *all* firms in a given line of industry were representative, and if an increase or a diminution of output were merely met by a simultaneous expansion or contraction on the part of each firm concerned, then no doubt the examination of the account-books of any one of them would tell us all we wanted about probable variations in price. But we know that this is not a necessary condition of expansion or contraction. As Mr. Robertson points

out, a change of this sort may be met *either* by a change in the output of existing firms *or* by a change in their number.[1] And if the latter event is what happens, then it should be quite clear, from what has been said already, that *the representative firm may cease to be representative and its cost curve cease to be significant.* Under such conditions—which, it is submitted, are just as probable as the other—resort to the representative firm is not merely unnecessary, it is positively misleading.

Finally we may briefly examine the special case of diminishing costs under competitive conditions. For it is quite clear that it was here, if anywhere, that Marshall expected the conception to be really significant. The opening chapters of Book V abound with references to the necessity of applying the "plan" in analysis of such conditions, and both Chapter XII and Appendix H do employ the plan continually.

But here again close examination seems to dispose of the necessity for so doing, and even to suggest that much of the obscurity in which this part of the Marshallian theory is undoubtedly enveloped is due to its adoption. It is quite true that if all internal economies were equal, unequal access to external economies, save in so far as it was due to natural limitations of space, might result in the elimination of those firms in a position of manifestly inferior advantage—always assuming that the existence of external economies, suitable for consideration in this relation and sufficiently powerful to produce such a situation, are conceivable.[2] But surely nothing obliges us to conceive of internal economies in this rigid and limited manner. If we are to restrict the term external economies to economies external to a particular firm but internal to the industry as a whole—and I submit that any extension of the term beyond that is illegitimate in this connection, since it assumes to be a function

[1] ECONOMIC JOURNAL, 1927, p. 572.

[2] The existence of such economies has been questioned both by Professor Young and by Mr. Robertson, and so far as practical applications of the doctrine are concerned, there seems much to be said for their scepticism. Most of the economies cited by the apologists of this doctrine—improved transport, the telephone, subsidiary industries, etc.—seem to be inappropriate to the consideration of the supply curve of any one industry and to fall rather into the sphere of population theory (see Macgregor, *Industrial Combinations*, Part I, Chapter I, for a very illuminating discussion of external economies); while it must be remembered that much of the plausibility of Marshall's exposition depends upon his assumption that internal and external economies vary together—an assumption which I submit is quite illegitimate. The whole doctrine of internal and external economies as presented by Marshall seems, indeed, radically in need of revision. But, for purposes of pure theory, it is legitimate to contemplate the situation in question, if only to exhibit the other anomalies of his exposition.

of one variable what is really a function of many—then surely we must recognise that what are internal and external economies for any one firm are, partly at least, a matter of the capacity and opportunities of management. What is an internal economy for one firm may be an external economy for another. And in any case it is surely obvious that, whatever their nature, the internal economies will vary with the nature of the management. The old doctrine which bade us consider the application of equal quantities of capital and labour to different pieces of land is not more artificial and unnecessary than this doctrine which assumes that all management must be of equal efficiency.

IV

So far in this analysis of the Representative Firm it has been suggested merely that the notion is superfluous, that there is no problem in the whole range of value theory which cannot be more satisfactorily treated without it. But now I want to carry the attack a stage further. I want to suggest, that is to say, that it is not only unnecessary, but misleading. Not only that it is possible to be clear and exhaustive without it, but that its use may actually prevent the attainment of clarity and exhaustiveness.

I have suggested already, in passing, certain ways in which, incautiously handled, the conception may give rise to misapprehension, the way in which it may mislead with regard to the construction of supply curves, and the way in which, in discussions of the stationary state, it may lead us to imagine that the average is the condition rather than the result of equilibrium.[1] But it is possible, I think, to condemn it on grounds more general than this. The whole conception, it may be suggested, is open to the general criticism that it cloaks the essential heterogeneity of productive factors—in particular the heterogeneity of managerial ability—just at that point at which it is most desirable to exhibit it most vividly.

I can best explain what I mean by an example drawn from the work of one of Marshall's own followers.

According to Mr. Robertson, the true Marshallian doctrine in this respect is admirably expounded by Mr. Henderson in *Supply and Demand*, chapter V, paragraph 4.[2] Personally, I

[1] I do not, of course, suggest that Marshall himself *could* commit so gross an error, but I do submit that such may well be the result of this mode of approach to problems of this character.

[2] ECONOMIC JOURNAL, 1927, p. 574.

think I should be inclined to question Marshall's whole-hearted approval of this version of his conception; but at least we shall do no violence to the facts if we take Mr. Henderson's treatment as the product of Marshallian influence. In the paragraph cited by Mr. Robertson, Mr. Henderson is assailing the old argument that the marginal analysis leads to the view that the price of a commodity is determined on the supply side by the cost at which the least efficient concern in the industry at any given time can market its products. What he has to say in this connection is so important for the rest of my argument that I make no apology for quoting it in full.

"Such an argument," he says, referring to the view I have just mentioned, "is a gross caricature of the marginal conception. The half-witted incompetent will, as we know well enough, speedily disappear under the stress of competition, and his place will be taken by more efficient men. There is an essential difference between him and the 'marginal coal mine' of which we spoke above. For the probability is that of the coal resources whose existence is clearly known, the more fertile and better situated parts will already be in process of exploitation, and there is not likely, therefore, to be a supply of substantially better seams which can be substituted for the worst of those in actual use. There is likely, on the other hand, to be available a supply of decent business capacity which can be substituted for the most inefficient of existing business men. The marginal concern, in other words, must not be conceived as that working under the least advantageous conditions in respect of the assistance it derives from the strictly limited resources of nature, but under average conditions as regards managerial capacity and human qualities in general. Thus, in agriculture we can speak of a marginal farm which we should conceive as the least fertile and worst situated farm which it is just worth while to cultivate . . . but we must assume it to be cultivated by a farmer of average ability." [1]

Now so far as this may be conceived to be directed against the very crude and silly view of the marginal analysis already mentioned, it is possible to agree with the intention, if not with the argument. As has been shown already, there is nothing in the marginal, or any other sensible form of analysis, which would leave us to suppose that there is room in the long-period adjustment for half-witted incompetents as controllers of business enterprise. It is the essence of ideal competition that men whose

[1] Henderson's *Supply and Demand*, pp. 59–60.

efficiency is below that of the lowest grade which the social demand, acting in a given situation, necessitates being taken into entrepreneurship, are sifted out into other positions in the system of equilibrium, just as lands below the margin in one use are relegated to inferior uses. In attempting to refute a doctrine of this sort, Mr. Henderson has the support of all economists.

But when he goes on to argue that, because of this, we are justified in assuming that in a long-period adjustment all producers are at least of average ability, I for one must enter a most emphatic protest. Even Adam Smith, that discredited *laissez-faire* economist, with his insistence on the original similarity of porters and philosophers,[1] did not go so far as this. How Mr. Henderson, who has had day by day the job of teaching men whose capacity, even when they are scarcely out of adolescence, demands half the letters of the Greek alphabet for its classification—for I cannot believe that in this respect things are any different at Cambridge from what they are at Oxford and London—how anyone who has had experience of this sort can bring himself to assert such a thing passes my comprehension—or at least it would, did I not believe it to be directly due to this confusing habit initiated by Marshall. It may be perfectly true that if one had a free hand to pick men from other industries, irrespective of the pull of demand, any given industry could be stocked with entrepreneurs of at least average ability. But it is surely absolutely illegitimate to generalise this argument—*unless one disbelieves altogether in the possibility of diminishing returns to managerial ability.* If one views the organisation of production as a whole, surely it is perfectly obvious that, in any given situation, the position in regard to managerial ability is precisely the same as the position in regard to other productive powers. The best lands and the best men are limited. There are not enough Josiah Stamps to go round; and if there is anything at all in the law of diminishing returns, there will come a time when the crowding of more factors under their control will give a less additional product than the utilisation of inferior talent. And there is nothing in the nature of things to lead us to suppose that this successive resort to men of lower abilities will proceed industry by industry—that we shall find all the Stamps in one line, all the ——s in another, and all the ——s in another. On the contrary, probability and general experience lead us to expect a more irregular dispersion. In some industries where technical considerations dictate huge units, we should expect to

[1] *Wealth of Nations*, Cannan ed., p. 17.

find a large proportion of the best organisers; in others, where technique permits very small units, few or none. But in a good many we should find some who are very capable, some who are "average," some who are at the margin of entrepreneurship, even in long-period adjustments. Mr. Henderson should reflect that if all entrepreneurs were *at least* of average managerial ability, they would at once cease to be average.

All this, of course, implies no opposition to the general policy, with which Mr. Henderson has more recently identified himself, of taking every reasonable step to ensure the maximum efficiency possible in all spheres of business management. Nothing that I have said about the requirements of long-period adjustment should imply any hostility whatever to the policy of chivvying up employers generally. That is what the business classes exist for—to be chivvied up generally—they are not retained by society for their contributions to general culture. At the same time, even here this notion of a limited fund of business ability is not without its uses. One has a disconcerting vision of some of the less cautious of Mr. Henderson's admirers going round from industry to industry insisting on the installation of the best abilities in each until, coming back to the one from which they first started, they find that there is less of the best there than there was before, it all having been transferred to the one they last reorganised. I submit that even in a sphere where reason is at such a discount as it is in practical politics, there is a very real need for us to recognise that, although any one industry might be considerably improved by the transfer to it of a few more of the best organisers, yet it does not in the least follow that industry as a whole would be any the better organised in consequence. And I submit that any theoretical instrument which blinds us to the ultimate facts demanding this recognition is a very poor tool of economic analysis.[1]

[1] Of course, this is not all that can be said against the conception. When we turn from the sphere of economic mechanics and examine the problems of change and development—those realms of economic biology which, according to Marshall, should be the Mecca of the economist—it may be urged that it is liable to veil from us the true nature of economic growth. This is not a matter which I wish to enlarge upon here— the idea was first suggested to me by Professor Young, and I gather that he himself is contemplating a more extensive development of it. But for the sake of completeness it may be pointed out that, in a world in which growth in the economic system proceeds just as much by way of differentiation and subdivision as by the expansion and development of particular economic units, the idea of a representative unit which preserves its essential identity while undergoing progressive expansion is apt to be very misleading. An industry commences as a group of units in each of which whole commodities are manufactured. It grows, and, as a result of technical changes and the expansion of markets, subdivision takes place. There is now one group

V

So far the argument of this paper has related chiefly to considerations of value and equilibrium. In conclusion it may be worth while to indicate very briefly what bearing it may be conceived to have on other departments of economic theory.

(1) In the first place, it may be claimed that it is finally conclusive against any idea of a tendency of profits to equality—however profits are defined and delimited. Arguing on different lines and treating not so much of the profits of entrepreneurs and business units, but rather of the incomes of dealers in commodity markets, Mr. Hawtrey reaches a somewhat similar conclusion in *The Economic Problem*.[1] When I reviewed this in *Economica* [2] recently, I remarked that I found it hard to think of an economist who had argued the contrary proposition. This statement I do not retract. But I think it right to observe that the idea of a Representative Firm is liable to give rise to a contrary impression. If, in the long-period adjustment, all firms were representative, then clearly in any industry all profits would be equal. I do not contend that Marshall would have argued in this way. It is, indeed, highly significant that in the chapters in the *Principles* which deal with profits the representative firm is conspicuous by its absence. But, as we have seen from the case of Mr. Henderson, it certainly does not require a very incautious use of the conception for a position not dissimilar from this to be arrived at.

(2) Secondly, it may be urged, considerations such as these imply great caution in interpreting the attempts which are made from time to time to establish by statistical analysis the optimal size of business unit for any industry. I do not refer here to the obvious difficulties of eliminating from such statistics the effects of momentary disturbances, serious as these difficulties are. I refer rather to the fact that, if the foregoing observations are correct, then even if, by the elimination of seasonal fluctuations, cyclical disturbances and the like, we can suppose our statistics to exhibit the result of more permanent tendencies, we must still recognise that *there is not one optimal size, but as many optima as there are different kinds of combination*, and that any attempt to

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of units carrying through one stage of manufacture; another in which the process is carried to completion. Surely in such a case to continue to speak of *the* representative firm of the industry in question is to suggest a state of affairs having no counterpart in reality—to introduce an economic nominalism which has not even the Knappian excuse of a legal continuity. It is no accident, I suggest, that in *Industry and Trade* where problems of this sort are dealt with, the use made of the Representative Firm is even more nebulous and half-hearted than in the *Principles*.

[1] Hawtrey, *The Economic Problem*, p. 40. [2] *Economica*, June 1927, p. 173.

conclude that divergencies from any one of these imply inefficiency may lead to serious errors of judgment.

This does not mean, of course, that, in despair of attaining perfection, statisticians should refrain from attempting such investigations at all. Insistence on the theoretical impossibility of obtaining exact results does not imply the need for a self-denying ordinance with regard to approximations; and it does not follow that *where technical considerations are of preponderating importance* investigations of this sort will not yield useful results, *even though other things are not equal*. Statisticians should be like Tertullian: they should be willing to believe in the absurd, lest theoretical scepticism should paralyse their activities. But, unlike Tertullian, they should not complain if subsequently rationalist infidels submit these beliefs to the most vigorous theoretical scrutiny.

(3) Finally, I submit, if the foregoing results are valid, they enable us at once to dispose of the theoretical flaws in the Report of the Colwyn Commission and the very valuable memorandum of Mr. Coates, against which Mr. Robertson has recently mustered so imposing an armoury of weapons. As a theoretical economist, I need hardly say how thoroughly I endorse Mr. Robertson's main conclusions, nor how entirely unacceptable I find the argument he opposes. But to show that the scarcity of the services of business men is on just the same footing as the scarcity of other factors of production, and that taxes on the payments for these services are to be explained in the light of exactly the same broad theoretical generalisations as apply to other taxes, does not, I submit, necessitate the resurrection of this cumbersome apparatus of representative business units. All that is necessary is to show (1) firstly, that a curve showing the particular receipts of particular firms over a short period is simply a chart of results, and does not represent ultimate causal factors; (2) that, in any given productive situation, different business men and different business units may be expected to earn different profits even in the lower paid; and (3) finally, that taxes on these profits will affect prices more or less according as the conditions of supply are more or less elastic. All this, of course, Mr. Robertson has done with a skill and persuasiveness which render repetition unnecessary. The contention of this note is merely that, the vindication of Marshall apart, a greater economy of theoretical apparatus was possible.

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January 1928

THE INDIAN RESERVE BANK AND SIR BASIL BLACKETT'S WORK IN INDIA

THE Indian Reserve Bank, which Sir Basil Blackett had hoped might be his crowning achievement in India, was side-tracked, and for the present has had to be abandoned. But though the Reserve Bank Bill was an unfortunate anti-climax, it must not be allowed to overshadow and detract from the splendid service which Sir Basil has rendered to India during his term of office as Finance Minister to the Government of India.

I

Sir Basil Blackett assumed office as Finance Member to the Government of India in 1923. The first thing which caused him considerable anxiety was the five years' accumulation of deficits which had continued from 1918 to 1923. Fortunately for Indian finance, a succession of good monsoons was experienced, which resulted in bringing prosperity to the country; the effect of this favourable cycle, together with a wise handling of the financial situation, has been that the accumulation of revenue deficits has been wiped out. Since 1923 the unproductive debt of India has been diminished by Rupees 76 crores (£57,000,000), and the productive debt has been increased by Rupees 189 crores, or almost £142,000,000. One significant test of this favourable financial position is to be found in the status of Indian Government credit on the British money market. Some years ago India had to pay 7 per cent. interest on sterling loans; this year she was able to borrow at a rate not much higher than British Government securities command.

Finance Ministers in India have to do a considerable amount of missionary work in educating public opinion in financial responsibility and in credit and banking procedure. In this field Sir Basil has done an immense service; his Assembly speeches on his budgets and his public addresses on monetary matters have been characterised by a lucidity which many an ordinary man in the street has been able to grasp and appreciate. He has preached the intricacies of high finance in such a clear and interesting way that many an Indian college student has been attracted to public finance as his special study. This is decidedly to the good and to the advancement of Indian public life.

The outstanding event in the Blackett administration was the work and the Report of the Royal Commission on Indian Currency and Finance, and the actions taken as recommended by the Commission. The Hilton Young Commission dealt with the following main problems :—

(*a*) The establishment of a gold standard for India;

(*b*) the creation of a Central Bank, its organisation and responsibilities;

(*c*) the ratio of the rupee to gold, and

(*d*) the arrangements to be adopted during the period which must elapse before the Central Bank can be organised and begin to function.

Sir Basil's administration will be historical for successfully dealing with the first and the third items mentioned above. India is to-day established on a gold bullion standard, and the battle of the rupee has been fought; the ratio has been fixed at 1*s*. 6*d*. to the rupee. The second item, and the fourth, which depends upon it, have been laid on the table for future consideration at a more convenient season.

In his sixth and last Budget Sir Basil Blackett was able to make one more contribution to Indian financial progress, for which his administration will be historic. In the Budget speech he himself said: "It is not a spectacular budget. After the budget of 1927–8, and the railway budget for 1928–9, with its large reductions in passenger fares and in freights, it might almost be called an anti-climax." No new taxation was imposed, and yet there has been accomplished the final and complete remission of the Provincial contributions to the Central Government. This now closes an incident which has been a serious burden to several Provinces ever since the Meston Agreement was made. The saving of those contributions will enable several of the larger Provinces—for instance Madras, Bengal, and Bombay—to have considerable sums of money each year to be utilised for the more distinctly nation-building departments of the Government.

Seeing that in some years a sum which reached nearly 1,000 lakhs of rupees had to be contributed by the Provincial Governments to the Government of India, one will easily realise the burden of it, and the relief which is now felt as a result of their remission. The Meston Award fixed a percentage of contributions which the provinces were expected to pay in order to meet the yearly deficit of the Government of India. These

proportions were: 19 per cent. from Bengal; 18 per cent. from the United Provinces; 17 per cent. from Madras; 13 per cent. from Bombay; 10 per cent. from Bihar and Orissa; 9 per cent. from the Punjab, and other provinces in smaller ratios.[1] The burden of these contributions will be appreciated when one calls to mind that Madras had to furnish no less a sum than 348 lakhs of rupees per year; "the Madras Government felt this sacrifice all the more keenly, since if their standard of public expenditure had not been kept by them in the past at a comparatively moderate figure, their windfall under the reformed system of finance would not have been so great, nor consequently would their contributions."

Well, all that is a thing of the past now, thanks to the work of Sir Basil Blackett, who introduced a personal note in concluding his last financial statement, and, bidding farewell to his office and to India, said: "I cannot more fittingly close my statement than with the prayer that no storm from without or from within may descend upon India to disturb the bright prospects of financial well-being to which she seems to-day to be justified in looking forward."

II

The question of a Central or Reserve Bank for India presents a number of intricate problems, both political and financial, which I fear it will take many years yet to solve. There is no question about the need for such a bank in India, both Indians and Europeans being agreed that the progress of India in industry and commerce warrants this further step in the correlation of her banking system. Consequently, when the Royal Commission recommended "the creation of a Central Bank," the announcement was received with genuine satisfaction, and with a desire on the part of representative Indians to co-operate in its establishment, for they realise that the lack of a Central Bank is a serious drawback to the development of a satisfactory credit system, and hinders industrial and commercial advance.

But before one can fully understand the attitude of well-educated and experienced Indian men of affairs towards this question, and their opposition to the Reserve Bank as introduced by the Government, one must bear in mind two or three things of vital significance in the situation. One thing is an attitude of mind—the psychology of popularity. Bishop Azariah of Dor-

[1] *India in* 1926–7, by J. Coatman, p. 218.

nakal explained this attitude recently in a Conference, in which he said :

> "Another weakness in all Indians is the love of popularity and the wish to throw responsibility on someone else; many of them are afraid to take responsibility, for fear of becoming unpopular. Indians," he said, "lack courage to do the right at all costs. This characteristic makes for a certain weakness in Indian national life."

This interpretation of the national character by an Indian is supported by many illustrations. The establishment of a Reserve Bank would undoubtedly have taken India a long way towards financial swaraj, but because the suggested constitution of the new bank was not just in accordance with the ideas of some of the more radical nationalists, strong opposition was developed, which finally resulted in defeating for the present the whole measure. The leaders were not willing to take a partial success and work on steadily until they could get what they wanted; it must be from the start exactly as they wished it, or nothing at all. In so doing they lost the substance in grasping for the shadow. Or, take another case, in certain provinces Swarajists, when given the opportunity, refused to accept Ministerial office; the only reason that one can believe being that they were afraid to assume the responsibility.

The political situation has complicated the issue. The Statutory Commission on the working of the Reform Scheme was soon to begin its work. The question before the Simon Commission is, Is the time ripe for another advance towards self-government for India, and along what lines? That question naturally has a very direct bearing upon the establishment and constitution of a Reserve Bank. Nationalist Indian opinion is working for more power in the hands of the Legislature and a lessening of the authority of the Executive. A State Central Bank as a function of the Legislature is, in their eyes, right in line with their political aspirations, and the logical method of advance. You see how closely related in the minds of Indians are these questions of banking and politics. We from the West are not so politically-minded; we distinguish between banking and politics, and try to keep them separate. But not so in India. Practically every question, financial and economic, has its political foundation and bias. Consequently, when Indians are thinking about establishing a Reserve Bank, or adding new

courses in the university, or considering military training, it quickly becomes a political issue.

There is still another far more formidable attitude of mind which must be considered in this connection. Indian opinion generally is obsessed with a great suspicion that a banking institution set up by the Government of India will have for its first and chief objective the serving of British at the expense of Indian interests. From the Indian point of view there are significant reasons for this attitude: the miscalculation in 1920 on the rate of exchange, and the costly efforts made to stabilise the rupee at 2*s*. have not been forgotten; the recent bitter fight over stabilising the rupee at 1*s*. 6*d*. in opposition to the Indian desire for the traditional ratio of 1*s*. 4*d*.; and as the result of Sir Basil Blackett's visit to London the introduction of an entirely new Reserve Bank Bill at the evident suggestion of the Secretary of State for India--these events cannot help but carry with them to the Indian mind the evidence of British interests, and the opposition of "Whitehall" to what Indian public men regard as Indian interests. Rightly or wrongly, there it is; the best-informed Indian opinion is suspicious that in this Reserve Bank British interests will stand first, and while they submit in distinctly political matters, they do not want their Central Bank dominated by England.

Coming now to the real question at issue—the constitution of the Indian Reserve Bank—the controversy has raged around a State Bank versus a Shareholders' Bank. Indian nationalist opinion and the large majority of the politicians throughout the country strongly favour a State Bank, which shall be organised and its policy determined under the direction of the Indian Legislative Assembly. On the other hand, British financiers and business men, as well as many Indian business men, favour a private Central Bank, free from direct political influence. The issue is vital, and the lines of cleavage are clearly drawn. A State Bank, whose policy and directorate shall be under the direct control of the Legislative Assembly, is what the Indian nationalists want; it is the financial part of the swaraj movement; and so strong and important is the desire that it cannot be refused serious consideration. The foreign financiers' position is equally strong and well defined; they do not have confidence in the ability of the Indian politician to control such a national institution as a Central Bank, and to determine its policy; they are not prepared to accept the position that Indian banking interests and politics should go hand in hand; they believe that the

financial interests of the country will be conserved best by keeping banking and politics absolutely separate, at least at the present stage of India's political development.

When one takes into consideration the experience of other countries and the prevailing types of Central Banks in them, one is convinced that at the present time the Shareholders' Bank is by far the wiser and safer type for India to follow. The pre-war tendency was to emphasise the place and control of the State over the Central Banks. Sweden and Australia are examples of that position. In Sweden the charter states that the Riksbank is governed by a board of seven directors in accordance with the laws laid down jointly by the King and the Riksdag. Of these directors, one is appointed by the King, and the other six directors are appointed by the Riksdag. The Riksbank is "placed under the guarantee of the Riksdag." In the Commonwealth Bank of Australia it is stated in the charter that the Government shall be responsible for the payment of all moneys due by the Bank, and the Government have a controlling interest in the policy and management of the Bank. But the war clearly showed the danger inherent in such a central banking system.—The Brussels Conference in 1920 adopted the following proposal: "Banks, and especially a Bank of Issue, should be freed from political pressure and should be conducted solely on the lines of prudent finance." The Bank of England and the Reichsbank of Germany are notable examples of the independent type. All through its long history the Bank of England has maintained its independent character, and has rejoiced in its freedom from Government control, but of course, as everyone knows, in times of national crisis there is close co-operation between the Bank and the Government. In the German Bank Act of 1924, which reorganised the Reichsbank, there occurs this remarkable statement: "The Reichsbank is a bank independent of Government control. . . . Thus the existence of a Central Banking system which provided the Government with a recognised financial agency has proved to be essential when the Government of a country is faced with financial problems of the first magnitude," but, "the offer of wise counsels in such matters is one of the important services that a strong Central Bank can render to the nation, but such services can only be looked for when the Bank's independence is fully safeguarded by law and practice." [1] "Monetary policy should be independent of political contingencies, and the surest way to secure this result is to place the control of the note issue in the hands of a bank.

[1] *Central Banks*, by Kisch and Elkin, pp. 36, 38.

These two considerations, economic and political, explain why the issue of notes has not been left in most countries under the control of the State, but has been handed over to appropriately constituted banks." [1] Other evidence might be produced, but perhaps enough has been said to show that the experience of most countries, and the position of most writers on the subject, is that a Central Bank independent of Government control is more desirable. This conclusion has a direct bearing on the question of a Reserve Bank for India; at the present stage of India's political experience and development it would not be a wise procedure to place the proposed Reserve Bank under the control of politicians. The Indian Central Bank must be kept above the vagaries of party politics, and the best way to do that is to make the Bank by constitution independent and free from political influence, with a mind of its own, and able to determine its own policy. That is the type of Reserve Bank which India needs to-day.

The following paragraph from the Irish (Free State) Banking Commission is of interest on this point:

> "Mindful as it is of the disasters of past years in all countries where currency was issued by the Government, and recognising the hazards which come from changes of Government, from the development of budget deficits and other evils from which no country has found itself immune, the Commission is definitely of the opinion that the management of the legal tender note issue should be placed in the hands of a non-political and independent body, which shall control the conditions of issue and shall have full control and custody of the securities it holds." [2]

III

What of the future? For the time being the *status quo* will remain; that is, the Government Currency Department will continue to function, and the Imperial Bank will carry on its banking business on Government account. But everyone realises that this is at best only a temporary arrangement. The work of the Simon Commission will have the right-of-way as the focus of attention for the next two years, and even banking reform will be side-tracked. Within two years the question of renewing the charter of the Imperial Bank will come up for consideration;

[1] *Central Banks*, by Kisch and Elkin, p. 6.

[2] *Ibid.*, p. 72.

in that connection, and also to review the broader issue of the Reserve Bank, it would be most opportune to have a Commission appointed to consider the whole problem of banking in India, as the Hon. Sir P. C. Sethna has advocated in an article on "Indian Banking" in a recent issue of *Capital* :

> "There is no doubt that there is enormous scope for the development of Indian banking. What has been achieved so far is comparatively very little indeed, and, as a writer in *The Economist* once pointed out, there are still approximately five hundred towns in India with populations of 10,000 and upwards which do not as yet enjoy any modern banking facilities at all. The External Capital Committee observe in their report as follows :
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> "'India possesses a vast store of dormant capital awaiting development, and in order to make this available for investment, banking facilities must be increased and extended. The examination of the various technical measures suggested in the replies with this object in view, is outside the scope of the Committee, but we would emphasise the importance of a co-ordinated survey being undertaken at the earliest opportunity of the whole field of banking in India. This should be followed by a detailed examination by an expert committee or committees of the lines along which progress should be effected.'"

It will be remembered that this was also the position and recommendation of the Royal Commission on Indian Currency, and since the breakdown of the Reserve Bank Bill the need for such a survey to deal with the additional questions of the future of the Imperial Bank and the extension of banking facilities throughout the country has become still more apparent. Sir P. C. Sethna continues in the article referred to above :

> "The extension of banking facilities is thus necessary in the interests of India's economic development. Whatever may have been the merits or demerits of the Reserve Bank Bill which had to be dropped, whosoever may have been responsible for the strong opposition it had to encounter and for its ultimate withdrawal, there is now a consensus of opinion in this country that the failure of the implementing legislation for a Central Bank emphasises the necessity for an early and exhaustive survey into the whole field of banking in India."

As an outcome of such a survey the need for an Indian Central Bank will again be expressed. For India to take her rightful place among the nations of the world she must develop a Central Bank; it will help to secure stable prices at home and the maintenance of stable foreign exchanges; it will also give India a place and a voice in the International Association of Central Banks which is coming.

> "Measures of currency reform will be facilitated if the practice of continuous co-operation among central banks of issue or banks regulating credit policy in the several countries can be developed." [1]

As to the form which the Reserve Bank will take when it next comes up for consideration, the writer is not convinced that the possibilities of the Imperial Bank of India have been sufficiently canvassed. In his written statement to the Royal Commission on Indian Currency the writer advocated that the logical thing to do would be to make the Imperial Bank the Central Bank for India. In reviewing the situation since the withdrawal of the Reserve Bank Bill, he thinks that the claims of the Imperial Bank will have to be reconsidered. Those in India who know the feeling of the country at first hand cannot think otherwise than that when the question comes up again the demand for a State Bank will be as strong as ever, and may easily result in another deadlock. By making the Imperial Bank the Reserve Bank for India, various questions which have become so prominent, such as those of a State Bank, of political influence, and of the personnel of the directorate, probably would not have arisen. At least we shall have to reconsider the question in reference to the Reserve Bank of utilising an organised and functioning Bank or a new Bank, and if the difficulties are too great to surmount in organising a new bank, then the easier way out of the *impasse* may be to reorganise the Imperial Bank as the Central Bank for India.

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[1] Resolution 3, *Report of the Financial Commission at Genoa*, 1922

BUSINESS FORECASTING

Business Cycles and Business Measurements. By C. SNYDER. (Macmillan: 25*s*.).

The Problem of Business Forecasting. By W. PERSONS and others. Pollak Foundation for Economic Research. (Pitman: 16*s*.)

Forecasting Business Conditions. By C. O. HARDY and G. V. COX. (Macmillan: 12*s*. 6*d*.)

Business Forecasting. By D. F. JORDAN. (Pitman: 16*s*.)

Business Forecasting By W. WALLACE. (Pitman: 7*s*. 6*d*.)

THOSE who have been investigating the subject of industrial fluctuations in recent years may be divided into three groups. The first, to which most economists belong, comprises those who are mainly interested in causes and, assuming fluctuations to be an evil, in seeking remedies. The volume recently published by Professor A. C. Pigou is the outstanding example of this type of investigation. The second group of investigators consists of those who are mainly concerned with the actual course of trade and the possibility of measuring fluctuations in business activity. Far the most interesting example of the work of such investigators is to be found in Mr. Carl Snyder's *Business Cycles and Business Measurements.* The third group consists of those who are mainly concerned not with the actual course of trade in the past but with the probable course of trade in the immediate future. They are the business forecasters. It will be observed that these groups are not mutually exclusive. Investigators who concentrate mainly upon the statistical features of the business cycle can hardly escape the discussion of causes, nor are they always able to withstand the temptation to project their curves beyond the present. Moreover, those who are mainly concerned with forecasting the future of trade base their predictions mainly upon the results of their examination of past events and sequences.[1] Nevertheless, the purposes which the three groups

[1] The possibility of forecasting future activity depends not upon the existence of cyclical fluctuations, but upon the possibility of establishing fairly high degrees of correlation between time series. This possibility *might* exist even if fluctuations in general trade activity were irregular, in the sense that they revealed neither secular nor cyclical changes.

have in view are sufficiently diverse to justify the classification which I have suggested.

The first question that suggests itself is whether we may reasonably assume general business activity to be capable of measurement. If it is not, then it is hopeless to consider the further possibility of measuring fluctuations in that activity. The various elements which together constitute general business activity are not only capable of measurement but have been measured for various purposes for many years. Further, the fact that people use the words " general business activity " shows that in some way or other they build up a synthesis in their own minds. The case is analogous to that of prices. The device of a general price index is one which is now universally accepted. The indexes employed by different countries are not built in the same way, even when they relate to the same elements, such as wholesale prices or retail prices or wages. Such questions as the number of items to be included, the methods of weighting and of sampling still form the subject of technical controversy among statisticians. But the fact that a price index which has been properly constructed is of value is no longer denied even by those economists who have the greatest horror of curves and equations. It is doubtful, however, whether it is realised why a price index possesses significance. It seems to me that it derives its significance from the fact that there is a fundamental sympathy between the prices of different products or services. These prices are ultimately governed by the real costs of production, and so long as the relative real costs remain unchanged the constituent prices tend to move together. The wholesale price index curve from 1873 to 1895–6 shows a very marked downward trend. From an examination of that curve it is known not only that the composite index has fallen but also that the vast majority of, if not all, the individual prices have fallen. After making full allowance for changes in real costs due to inventions and improved organisation (or, in the case of some raw materials, the operation of the law of diminishing returns) the scatter of prices is anything but arbitrary. If it were arbitrary, a general price index curve would lose all economic significance. If changes in that curve were due to purely arbitrary and wholly unrelated changes in the constituents it would convey no information about the latter and would therefore be meaningless. It is the element of stability about the scatter that gives it significance. The tendency for individual relative prices to conform to relative real costs of production acts as a sort of centripetal force, the existence of which gives a meaning to a composite index.

It seems to me that a centripetal force also exists which gives meaning to the words "general business activity." In the economic world there is such a thing as an industrial balance. We know that if one industry or a small group of industries shoots too far ahead it becomes relatively unprofitable and remains unprofitable until other industries have caught it up. If another industry or group of industries lags behind it becomes relatively profitable and its growth, relatively to the growth of other industries, is accelerated. Relative profit acts as a unifying force tending to restore and to maintain that relationship between industries which is appropriate to the expressed needs of the community. It is for this reason that the words "general business activity" possess significance and an index of business activity is worth seeking. This statement does not exclude the possibility, even the inevitability, of long-period changes in the relative importance of individual industries or other forms of economic activity. Just as changes in real costs influence the scatter of individual prices over a long period so, too, the decay of some industries and the discovery and development of new industries produce long-period effects upon the economic balance. But the effects of such changes are not of the first importance in the discussion of cyclical fluctuations either in prices or in industry. It may therefore be presumed that if it can be found, an index of business activity, by revealing the significant features of such fluctuations, would constitute a real contribution to economic knowledge.

Mr. Snyder has endeavoured to construct such an index. While it would be impossible to give an adequate summary even of the method which he has employed, it may be worth while attempting to describe, in language stripped, as far as possible, of technical terms, the chief stages in his extremely elaborate investigation. The investigation may be divided into two parts, the first being concerned with the long-period growth of industry, the second with business cycles. The first differs from similar investigations only in the method of synthesis. Mr. Snyder submits curves showing the growth of population since 1800, the growth in the production of well-known commodities and the growth in other forms of activity, such as railway traffic, imports of raw silk and cigarette consumption. He experiments with two samples, one containing 49, the other 87 series, each relating to some form of economic activity. Having expressed all in a form showing the rate of growth per annum, he merges them for the periods covered by all the samples. His method is to take the

unweighted average. He defends the use of the unweighted average on the ground that even the smaller number (49) of samples is relatively large and is representative of many fields of productive activity. He finds that the results correspond very closely to those discovered by other investigators—Day, Stewart and King—who employed weighted averages. The results are interesting. The rate of growth of population since 1800 has been about 2·3 per cent. per annum, though it has fallen steadily during the last fifty years. During the later period, however, the rate of growth of productive activity has remained almost constant at about 3½ per cent. per annum, which may be regarded as the rate of normal growth. He states that business fluctuations may be defined as deviations from the line of normal growth, and is therefore led to consider the statistical problem of measuring such deviations.

The second part of the investigation is divided into two sections, the first of which is concerned wholly with the post-war period and seeks to measure business fluctuations during that period, for which the necessary data are available. First he considers each of a large number of series or different forms of economic activity and subjects it to the following treatment. In the first place, he measures the secular trend by the device of the moving average, or, where necessary, by fitting the appropriate smooth curve to the actual data. As he is now concerned with a comparatively short period (that is, with cyclical fluctuations, not with secular trends), seasonal fluctuations become important. His second step is therefore to find the seasonal index for each month and to multiply the ordinate for each month on the line of secular trend by the seasonal index for that month. The result is a figure which indicates what the activity would be for that month if there had been no business cycle, that is to say, the curve which is shown is the curve of normal growth after allowing for normal seasonal fluctuations. The relation of the line showing the actual data to this new line shows the fluctuations of activity in the item or series under consideration. He measures the cyclical movement by dividing the ordinate for each month on the line containing the actual data by the corresponding ordinate of the line of normal growth, corrected for normal seasonal fluctuations; in other words, he multiplies the ordinate of trend by the seasonal index and divides the product into the actual data. The result for each month is expressed in the form of a percentage deviation and the appropriate curve is plotted. All this is done for each series, and we shall presently find that an enormous

number of series are employed. Some of the series are expressed not in weight or volume, but in value. Since values are influenced by the general price level, Mr. Snyder was compelled to "deflate the dollar," that is to say, to eliminate, from the series expressed in values, the effects produced merely by changes in the value of money. In this way all the series are reduced to a common standard. It will also be observed that the index number of fluctuations is based upon the curve of normal expectancy, so that the question of fixing a suitable year as base does not arise.

So far we have been concerned with the way in which each of the selected series was transformed by Mr. Snyder. In the next section of the book he discusses the series which he selected for the purpose of securing a composite index for general business activity. In sampling and weighting the various elements of business activity he has employed 56 series for which monthly data were obtainable from the beginning of 1919. These are divided into the following five groups, to each of which an appropriate weight has been given: (1) productive activity 29 per cent.; (2) primary distribution 22 per cent.; (3) distribution to consumers 26 per cent.; (4) general business activity 17 per cent.; (5) financial activity 6 per cent. These groups include 28 items; for example, producers' goods and consumers' goods are included in the first. The item "producers' goods" itself includes 15 series, to which varying weights are given. Thus it will be seen that Mr. Snyder builds up averages upon averages. The methods of classification and the weights given to different series and groups of series will no doubt form, among technical statisticians, a subject of controversy similar to the controversy regarding the items and weights employed in the construction of price index numbers. But the problem of selection and of giving appropriate weights falls into a different category from the more fundamental problem whether any form of index possesses economic significance. Having built up the separate series in the way already indicated and given them appropriate weights, Mr. Snyder merges them in a single series representing general business activity, and submits it as a measure of cyclical fluctuations.

Mr. Snyder is not the first to attempt to measure business cycles. The three-curve indexes of the Harvard Economic Service and of the London and Cambridge Service are already well known; so, too, is the composite curve of the American Telephone and Telegraph Company. Moreover, single line indexes are employed by private services which supply business forecasts, although these, however valuable they may be for their

immediate purpose, are not generally accepted by scientists as satisfactory measures of business activity. Mr. Snyder, however, seems to be the first to have drawn upon such a wide range of material as that which has become available since 1919, and to have submitted a single line index which is claimed to be a scientific representation of the business cycle.

At this stage one comment may be offered. Mr. Snyder himself observes that Professor Wesley Mitchell had already suggested that it was impossible to isolate cyclical from seasonal fluctuations; for example, "a revival of business activity is likely to occur in any particular series at the season of generally high activity, and depression is likely to begin at the season of generally low activity." I venture to suggest that it is also impossible to isolate cyclical fluctuations from secular trends. It is already evident from statistical data now available that cyclical fluctuations are materially influenced by secular trends in prices. Depressions are deeper and more persistent and booms more modified and of shorter duration when the trend of prices is downwards than when it is upwards. If we ignore price trends there remains the fact that industrial fluctuations may also be materially influenced by the rate of growth of population (which is the chief determinant of the rate of growth of industry) and the rate of growth which is independent of the growth of population. There is a strong presumption that the net effect upon cyclical fluctuations of a rapid growth of population is similar to the net effect of an upward secular trend of prices, that is, it tends to curtail and mitigate the depression and to prolong and intensify the boom. This fact is important in relation to the geographic unit from which the data are drawn. Mr. Snyder regards, for his purpose, the whole of the United States of America as a single economic unit, and the weights which he gives to the various series are influenced by that fact. If, however, the New England States and, say, Montana, were regarded as separate units the weights given to different series would need to be considerably modified (for example, Montana produces metals but no cotton) and the results might be different. The rate of growth of population has varied considerably in different parts of the United States, and it seems fairly evident that these have experienced different fluctuations. The identification of units of economic investigation with political units may result in obscuring many facts of significance in the study of industrial fluctuations. The results revealed in the general business index curve drawn by Mr. Snyder is a composite index for a series of geographic units

which differ from each other more materially than Germany differs from this country, with the result that while it may be true of the United States as a whole it may not be true of any geographic unit within the United States. While we were lost in amazement at the recent prosperity of the United States, the manufacturers of New England were bemoaning the fact that their industries were suffering from the movement of trade westwards.[1]

A further general consideration may by submitted at this point. Mr. Snyder divides the influences upon trade into secular, seasonal and cyclical. In an early chapter he points out that extraneous factors such as wars and discoveries of gold have had remarkably little influence upon the secular growth of trade, which, in the face of all political and accidental factors, has shown a remarkable persistence and consistency. Nevertheless, the appearance of external influences of that type produces a marked effect upon so-called cyclical fluctuations, what is truly cyclical being due to the influence of forces inherent in the industrial system.

The next stage in Mr. Snyder's investigation can only be indicated without discussion. Since 1919 there has existed "a very accurate index of payments by bank cheques, through the compilation of debits to individual accounts." The index of bank debits outside New York corresponds very closely with the volume of trade index, and for the period covered by the two the former may be regarded as an adequate alternative representation. Presumably, therefore, if the bank debit index had been available over a long period it would have been similarly satisfactory as a representation of business fluctuations, provided allowance had been made for changes in prices. The index, however, does not go further back than the year indicated. But bank statistics of cheques going through the clearing houses exist from the year 1875 down to the present. During the period for which both were available they have followed the same general trend and "correspond almost exactly, even in the minor fluctuations." From 1919 to 1922 the average ratio of debits to clearings was 1·14 : 1, and Mr. Snyder therefore multiplied clearings by 1·14, thus obtaining a monthly series from 1875 to the time of writing. When this had been corrected for changes in prices, seasonal variations and secular trend, it was deflated for changes in prices. Empirical weights for the price index were used, those weights being given which for the post-war period made the correspondence as close as possible, and the result is presented as a curve representing the

[1] The south of England cannot be said to be now suffering from depression of trade.

cyclical fluctuations of business from 1875 onwards. This represents the most courageous attempt yet made to exhaust the possibilities of very meagre statistical data. The remaining chapters also help in making the book the most interesting study in realistic economics I have seen for a long time.

The relative merits of Mr. Snyder's index and the three-curve index of business activity will no doubt form the subject of considerable controversy among statistical experts, in whose hands the problem may be left. It is sufficient to state that the sequences which they have revealed have led to attempts to employ them in forecasting future changes. Forecasting is, and always has been, a necessary part of business. " When a man enters business, he enters a forecasting profession. He may forecast badly or well, but forecast he must. He may scorn business forecasters, but he cannot help being one. He may shun statistics, but he cannot help using them." By means of careful statistical research it is possible to draw inferences and establish probabilities. It is true that the devices, such as curves of trend and co-efficients of correlation, do not constitute arguments but merely state facts. In business forecasting, however, carefully established facts, expressed in a manner which reveals their significance, are of the first importance. Further, Professor Persons, in an admirable essay included in the book from which the above quotation was taken, points out that the data provided by economic statistics are not of the kind in which the theory of numerical probability can provide any assistance. " In particular, reasonable forecasts of economic development can only be made by application of the usual methods of argument. To be sure, the conclusion of such arguments are expressed, not as certainties, but as probabilities. They are not, however, numerical probabilities," but merely probabilities as distinguished from certainties, that is, " non-numerical statements of the conclusions of inductive arguments."

The probable future of any business firm is governed by three sets of objective influences, namely, general trade conditions, special factors influencing the industry of which the firm forms part, and special factors influencing the firm as distinguished from its rivals. Forecasting services usually confine their attention to the first of these, and the majority of the books which have been written on the subject are similarly restricted in their scope. *Forecasting Business Conditions* may be quoted as an excellent illustration of this type of book. It contains a useful description of the methods employed by the best known of the private services together with an estimate of the value of particular

items, such as transport, banking transactions and the stock market, as indexes of general trade conditions. The treatment of statistical devices remind one of books on practical mathematics once in great demand among engineers who were not mathematicians; it can hardly be said to throw any light upon statistical mysteries for the non-mathematical economist. Nevertheless, as a general description of forecasting methods in common use it may be recommended even to the latter. Mr. Jordan's *Business Forecasting* may be placed in the same category. It contains a longer description of the stages of the business cycle and is more easily read by those who know no mathematics; but it is less recent than the other and contains nothing of value upon the existing services.

The volume published by the Pollak Foundation for Economic Research, from which the above quotations have been drawn, falls into a different category. Although largely concerned with general business conditions it contains an extremely useful series of papers dealing with the objective influences determining the course of particular industries. In a wise article on the relation of manufacturing policy to the business cycle Mr. L. D. H. Weld, of the well-known firm of packers, Swift & Co., shows that an industry may really be a combination of industries each branch of which presents special problems calling for separate treatment. "What we develop on pork operations is of little value in determining policy in the manufacture and sale of glue, or of fertiliser, or of soap. Hides and wool have different relations to the business cycle. Cold-storage operations in butter and eggs present their own problems." It is obvious that general trade conditions are not a safe guide to the probabilities of any one industry. At one period during the war the German submarine campaign was extremely successful off the north Coast of Spain. Ships failed to bring Spanish ores to this country and many of our blast furnaces had to be shut down. For this reason our stocks of coke rapidly increased; the price of coke fell to an unremunerative level and the production of coke was considerably reduced. This in turn created an acute shortage of toluol and benzol, which were urgently needed for the manufacture of explosives. A crisis developed as the result of which the by-products came to be regarded as the main products. A large number of additional coke-oven plants were constructed and the supply of coke was afterwards far in excess of the demand. The conditions were, of course, abnormal, but the same type of problem appears even under commercial conditions. In some cases the raw material of one industry may be the by-product of another industry; as

Mr. Weld points out, the leather trade is influenced by the fact that hides are a by-product of the packing industry. Again, oil-cake is a by-product of the vegetable oil industry. In other cases the material is the product of the agricultural industry and its supply, therefore, cannot be accurately estimated far in advance. Some industries are largely at the mercy of changes in fashion; thus, for example, the boot and shoe industry has been seriously affected in recent years by the growth in the demand for patent leather and bright-coloured shoes and the introduction of rubber heels and composition soles, while the textile industries have been affected by the growing use of artificial silk. New inventions may also prove a disturbing factor—railway traffic has recently been materially affected by the growth of motor transport by road; the internal combustion engine has upset the calculations of builders of steamships. Export trades are subject to unforeseen fluctuations due to changes in tariffs or the growth of local industries of a competitive character. New industries providing substitute products may grow up in a night—the growth of the motor-car industry has inflicted irreparable injury upon the saddlery and harness trade. In post-war Britain, where the old industrial balance has been destroyed, few people would venture to predict the probable course of trade in coal or cotton. In the case of new industries there is little or no experience to draw upon, and the task of the business forecaster becomes well-nigh impossible. There is, it is true, a curve of growth which is fairly representative of new industries that have afterwards played an important part in the national economy, and it may reasonably be employed in predicting the future of the electrical and similar trades; but it only becomes of value when an industry has passed through the earliest stages of development and its future place in the national economy comes within sight.

The individual firm has also to reckon with external influences which may be peculiar to its own business. Mr. Wallace's *Business Forecasting and its Practical Application* stresses these influences. It contains an excellent general statement of the problem and a description of the general services already provided. Moreover, as Mr. Wallace is the economic adviser of a well-known English manufacturing firm, the setting of the book is British rather than American, and may therefore prove to be more attractive than the larger American volumes to which reference has already been made and which contain the results of first-hand investigation. But the more interesting and valuable chapters of Mr. Wallace's book are those in which he applies the methods of forecasting to the needs of an individual firm. A firm of cocoa and

chocolate manufacturers is obviously deeply interested in the conditions governing the cocoa and sugar industries as well as in general business conditions. Its market may be confined to a well-defined area. If that area be, say, South Wales, its own fortunes are therefore largely governed by the course of trade in that region, and a business forecasting scheme set up by the firm would need to provide for a close and continuous survey of the local coal-mining and steel industries.

It is not the function of an economist to forecast the probable future of an individual firm. There is no reason why he should not attempt to forecast the future of an industry into the conditions of which he has conducted an elaborate investigation. If it be true that the test of a science is to be found in the power of prediction which its study confers, it is clearly part of the normal function of an economist to study the past and future trend of industry in general, and this clearly involves the study of industrial fluctuations. If this be admitted it raises a question of importance to teachers of economics who are expected to train future economists. A scientist should be able to take a critical view of the phenomena which he has to investigate. The business cycle is an economic phenomenon of the first importance, and a phenomenon which can only be described with the use of graphs which bear a definite relation to each other; each of these graphs is a statistical expression of a complex of facts which are only fully known to the few who are responsible for their manipulation. The mere comprehension of the statistical data which comprises the economic fact known as the business cycle is thus only possible to those who are acquainted with a certain amount of statistical technique. Whether the economic fact has been accurately expressed can only be known to those who are able to evaluate the statistical technique which has been employed in arriving at that fact. Most of us who teach economics are not in this happy position.

The economists of to-day may be divided roughly into four groups. There are some to whom statistical methods are anathema; curves, equations and even tables obscure rather than reveal the truth. Others possess some knowledge of the most elementary methods of statistics. They know the meaning of mode or median and partly understand the bell-shaped curve; they may even appreciate the difference between the arithmetic and geometric mean to the extent of sometimes employing the latter. They are able to follow, with an effort, a statistical presentation provided no reference is made to standard deviation, "goodness of fit" or partial correlation. The third group consists of those who have studied the theory of statistics

sufficiently to follow laboriously the statistical data which are submitted by economic statisticians. But they are unable to use statistics of the same type as a real instrument in their own investigations. The fourth and last group consists of those who have a mathematical bent and are sufficiently trained not only to understand the technique of statistics employed in modern investigations but even to employ such technique in their own investigations. Most, however, even of the last group, are unable to test the real scientific value of their technique. They use statistics as a tool which has been placed in their hands, but they are not themselves statisticians. They may be engineers but they are not machine-tool makers. The real statistician of the type represented by Professor Bowley is essentially a mathematician, and to him it is a matter of indifference whether his data be drawn from economics or some other science.

Teachers of economics find it difficult to make up their mind whether students should be required to make a serious study of statistical theory and the mathematics which is necessary in order to understand such theory. If such a course had been adopted in the past, some of our best economists would have been frightened away and the science would be very much poorer than it is. But the science has clearly advanced from the stage at which the student could be told that mathematical economics was but the plaything of a few outstanding economists who were also mathematicians and that mathematical work in economics could be relegated to an appendix. The mathematical expression of a theory which can be expounded in simple English is probably of no greater value to-day than in the days of Jevons and Edgeworth. But the mere descriptions of economic phenomena now involve a fairly elaborate statistical technique; economics is becoming more and more a statistical science, and one of the dangers of the present is that statistical technique will be employed by those who do not understand its limitations. Perhaps the wisest thing to do is to require, not that all students should study statistics for the purpose of utilising it in handling economic phenomena, but that those who do study statistics should be provided with sufficient preliminary mathematical training to enable them to use the statistical instrument with full knowledge of its value and its limitations. The amateur statistician is the enemy—and among the crowd of economic statisticians, particularly in the United States of America, there are many amateurs. But they do not include Professor Persons and Mr. Carl Snyder.

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THE MYTHOLOGY OF REPARATIONS

The Mythology of Reparations. By ROBERT CROZIER LONG. (London: Gerald Duckworth & Co., Ltd. 1928. Pp. 199. Price 6s.)

IT will soon require some courage to maintain in public that transfer difficulties can, let alone will, arise under the Dawes Plan, for it has become fashionable to prove that the transfer of the annuities is automatic, inevitable and fool-proof. For a scientific development of this view reference may be made to an article by Herr Alfred Lansburgh in *Die Bank* of December 1927. Mr. Long's presentment is more popular in form—and therefore more dangerous if the view is erroneous—and it is accompanied by a certain amount of extraneous matter which gives the author elbow-room for displaying wit and humour which enliven his pages. It might be suggested that Mr. Long is, indeed, ἥσσων σκώμματος; he cannot resist a joke, and while we may be grateful for wit that has produced an amusing work on an arid subject, this little foible has to some extent reacted on the limpidity of his argument and of its arrangement.

Almost at the outset of his examination Mr. Long remarks that "the distinction made between the German debt to the Allies and other countries' debts to abroad has had a bad influence upon the collection of Reparations. New economical theories and new organisations never heard of in connection with debt have been devised, and the result has been to complicate a problem that at the best was hard"; and again, "the reparation debt differs in nothing except in magnitude from other public debts to abroad." There is almost as much virtue in your "except" as in your "if"; as who should say that one ounce of strychnine differs in nothing except in magnitude from the tenth part of a grain! And *pace* Mr. Long there are important differences which are more than enough to account, not for new theories, but for the application of theories to the particular facts and their elucidation for the public. In the first place there is the minor difference that the amount of the debt has not been finally determined, as the world of finance understands final determination. In arguing with Mr. Long not much stress can be laid on this difference, for he holds, with some consistency, that 132 milliard

gold marks is a feasible capital debt. It is more significant that with one exception all other foreign debts of any magnitude have been contracted, generally but not always, for productive purposes, between willing lenders and borrowers over a long series of years; the debt has only been contracted if there were lenders who felt reasonably certain that the borrower would and could pay the interest as it fell due and ultimately repay the capital or maintain his own credit so that its obligations could be sold on the open market without unreasonable capital loss. (The one exception is constituted by the French indemnity after the Franco-Prussian War, and an examination of the differences between that indemnity and Reparation might have been instructive.) In this case there has been no lender, and the debtor has not borrowed to further his production nor voluntarily mortgaged recognisable future prosperity to save the present generation from burdens which they would not perhaps, for political reasons, willingly shoulder. The debt has been imposed, and it was imposed in the first instance, *i.e.* under the Treaty, without consideration of the debtor's capacity; the modified debt which is involved in the Dawes Plan was arrived at after consideration of the debtor's capacity, but with no guarantee that it did not exceed it.

And here we reach what appears to the reviewer to be a more fundamental misconception in Mr. Long's mind. The *raison d'être* of the Transfer Committee is this: the experts believed that Germany could raise certain given sums internally, but did not feel the same assurance that these sums could be transferred abroad. Their doubt is founded on the fact, which Mr. Long does not dispute, that an external debt is a heavier burden than an internal debt, and that therefore proof that a given internal burden of taxation can be borne is no proof that an external debt of the same dimensions can be borne, *i.e.* in the long run transferred without endangering currency and budgetary stability. Mr. Long speaks of the "confusion of a real Distinction between revenue raised for home consumption and revenue raised for payment of Reparations with *an imaginary Distinction between the two kinds of revenue in the matter of transferability*. . . . The real Distinction is that revenue raised for home government is—if governments are assumed to render services—no burden, whereas taxation levied for reparations is a burden. *In the matter of transferability both kinds of taxation are identical.*" The italicised phrases (Mr. Long is not responsible for the italics) are almost unintelligible; no one ever suggested that there were two *kinds*

of taxation, one of which was more easily transferable than the other. The words only have sense if they are intended to deny what Mr. Long has already admitted; he must intend to convey to the reader that if a given sum can be raised by way of taxation it can be, *ipso facto*, transferred abroad, and in the last analysis this must mean that there is no difference between an external debt and an internal debt. The untenability of this is patent; in theory you could tax a country almost anything less than twenty shillings in the pound if the interval between collection of the tax and its redistribution in the form of internal debt payments and governmental services was reduced to the vanishing point; by and large the productive capacity of the country would not necessarily be seriously damaged, while similar taxation for the purpose of handing the proceeds to the foreigner would bring economic life to a standstill.

The raising of the sum required for payment abroad by taxation is the first step in the process, and not the whole process. Unless the sum can be raised by taxation (subject to certain theoretical qualifications which need not affect a practical conclusion), *cadit quæstio*. But even if it can be so raised it would appear to the reviewer that two further conditions must be fulfilled before it can safely be concluded that the sum raised is transferable.

Firstly, the proceeds of taxation are potential capital which has been withdrawn from the community. If it had been withdrawn for internal purposes, it would find its way back, and the withdrawal would be temporary. If it is to be transferred it is withdrawn permanently, and the question arises whether it can be spared. In certain passages Mr. Long speaks as if all internal savings could be spared and transferred, but some part of each year's savings must be devoted to capital replacements and capital improvements.

Secondly, the capital withdrawn and handed to the foreigner represents a command over German goods and services, and someone must be found who is willing to take German goods and services to that value.

Now as regards the first condition, all that need be said, as an argument against Mr. Long, is that there is nothing to show that Germany could spare the capital, for she has borrowed it back again and a great deal more in addition. The rate of interest inside Germany and Germany's willingness to borrow large sums abroad at not less than 8 per cent. all in are prima facie evidence that she has hitherto needed the capital. This

evidence can indeed only be rejected by those who believe that Germany has either wantonly or wastefully borrowed abroad, and Mr. Long's sympathy is plainly with the borrowers and against those, such as Dr. Schacht, who have attempted to dam the stream of foreign loans. We may grant without difficulty for the sake of the argument that the amount borrowed abroad has been productively employed and will earn its own interest and amortisation; nothing can alter the fact that Germany has had to pay a given sum abroad as reparation (with no certainty that it represents a payment on capital account), and has in effect contracted in the future to pay interest upon it, having reborrowed it abroad. Whether this first condition can be fulfilled must therefore be regarded as not proven.

The evidence as yet produced regarding the fulfilment of the second condition is equally negative. Mr. Long will have none of this second condition: "Another [fallacy] is that while the Allies may continue to let in the non-Reparation exports of Germany they can keep out exports representing Reparations. In reality, the Allies can keep out German non-Reparation exports, but they must let her Reparation exports in." The fallacy is probably an invention of Mr. Long's brain, but it has more substantial truth in it than the fallacy which he sets in its place. If in all circumstances "Reparation exports" found their way out, that would imply some sort of prior lien on German goods and services in the hands of the Transfer Committee. In fact the mechanism of the Dawes Plan is such that German goods exported cannot be confined to goods representing payment of reparation. Supposing that Germany's normal exports could be taken as deliveries in kind, as they cannot, Mr. Long's statement might be borne out by future events. Foreign importers would buy their marks, perhaps receiving some inducement from their Governments to do so, only from the Transfer Committee, and German exporters would have no foreign exchange to finance necessary imports, with a consequent breakdown. In practice Germany's normal exports are substantially left to take their own course, and the foreign exchange resulting therefrom is available for purchases either by the Transfer Committee or by the German importer. In fact, if these transfers are to be made effectively, and not from the proceeds of foreign loans, the foreigner must buy enough to cover necessary German imports *and* the sums awaiting transfer, and if he does not, the importer obtains the exchange, for he will if necessary pay a premium for it, which the Transfer Committee is forbidden to do.

Mr. Long gives a graphic illustration which it is necessary to quote in full. He simplifies the problem by supposing that there is one recipient of reparation, whom he calls Utopia. "It is assumed that before Reparations began there were no capital transactions between Germany and Utopia. In that case, if Utopia bought goods worth £100,000,000 from Germany, Germany bought goods worth £100,000,000 from Utopia. The Reparation liability is £10,000,000. When Reparations were first paid, Germany paid Utopia £100,000,000 for Utopian goods and £10,000,000 for Reparations. As this money had to be spent in Germany, Utopia bought from Germany goods of value of £110,000,000, but as Germany was only paid £100,000,000 by Utopia she had an export surplus of £10,000,000. It is assumed that Utopia's Government gave way to the clamour of manufacturers, and tried to prevent the import surplus. The tariff was modified so as to keep out German goods of value £10,000,000. Utopia now bought altogether £100,000,000 worth of German goods, and as she had to use the £10,000,000 Reparation payment in Germany, she paid to Germany out of her own pocket only £90,000,000. Germany therefore bought £90,000,000 worth of Utopia's goods. The trade balance was: German export to Utopia £100,000,000. Utopian exports to Germany £90,000,000.

"The Utopian tariff was raised further by stages, but at each stage the German export surplus remained. Utopia might have decided to raise her tariff so high that she could exclude all the former non-Reparations goods from Germany, but in this case Germany would buy nothing at all from Utopia, and as she would still be paying the £10,000,000 to Utopia, her old export surplus of £10,000,000 would remain."

This illustration seems to assume everything which has to be proved, and by altering the terms of the problem we may equally well prove the impossibility of transferring the £10,000,000. We are perfectly entitled to assume for the sake of the argument that in order to subsist and produce the goods which she exported to Utopia, Germany had to import goods to the full value of £100,000,000. In that case either Germany must have credit for the £10,000,000 or she must export to the value of £110,000,000. On Mr. Long's argument, in certain circumstances it rests not with Germany but with Utopia to decide whether recourse can be had to the latter alternative. If the former alternative is adopted, however, there is no export surplus and no solution, but merely a postponement of the solution. This is clearly recognised by Mr. Long, for he proceeds to remark that, "given the condition

that Germany pays the mark annuities *and that she ceases to import goods paid for with borrowed money* (again the italics are the reviewer's), nothing can prevent the export surplus." So the illustration illustrates nothing except what we all know, that reparation can only be paid by a surplus; it does nothing to show that, or how, that surplus can be created.

Mr. Long believes that it must automatically be created if once the annuities are raised within Germany by taxation; his essential argument rests, in fact, on the classical theory of foreign trade and its applicability to a case of this nature. If Germany ceases to borrow and continues to transfer, the usual process is set in motion; gold flows out, the discount rate is raised, internal prices fall while external prices rise, imports are discouraged and exports stimulated, a reduced standard of living on lower wages is reached, until finally a new equilibrium is established. It would clearly be absurd to deny that within limits this normal progress can be effective; to deny that it has limits is once again assuming what has to be proved. The limits, of course, escape exact definition, and the experts' plan may be regarded as an experiment for deciding where they must be traced in this particular case. Let us examine briefly the steps in the process, which it must be remembered is to reduce a large adverse balance to a markedly favourable one.

We have in the first place a possible contraction of imports. Mr. Long is in error in implying that the experts saw in an improvement of the export side of the accounts the only way of producing a final surplus. Allowance must certainly be made for the progress of invention and its power to enable Germany to dispense with much that is now necessary, but Germany's dependence on the foreigner for her food and her raw materials will remain great, and the proportion of her import trade ascribable to luxuries or other articles which have no influence on the production of export goods is small. Their complete elimination, were it possible, would go but a small way to converting the present adverse balance into a favourable one. As regards exports, Germany is far from having any monopoly in the staple articles which she sells to the foreigner; on the contrary, they are highly competitive. We must therefore rely in the main on her ability to manufacture them more cheaply than the foreigner; leaving out of account the question how far a cheapening of price in the articles in question can stimulate demand, how far, that is, the demand for typical German exports is relatively inelastic, and remembering only that some at any rate of Germany's customers

will protect themselves against cheap goods, we have to ask ourselves whether under the pressure of a strained exchange and dear money it will prove possible to effect the necessary adjustment in prices, *i.e.* in wages and the standard of living.

It is here, it would appear, that the abstract theory, by omitting to take account of an important complicating factor in real life, threatens to break down in actual practice. There is nothing under modern industrial and social conditions more difficult than to lower the general wage level and the resultant standard of living. As Mr. Long himself observes, "the standard of German living is ever higher, and it cannot be easily depressed below a continually rising level," in which connection, the recent rise in German wages and German prices is perhaps the most significant phenomenon which invites attention since the coming into force of the plan. When the natural forces on which he relies come into play, is there any guarantee that the wage-earner will not frustrate their full development? Confronted with two alternatives, full employment on lower wages, or partial unemployment with the maintenance of the old standard for those that remain in employment, post-war experience elsewhere would suggest that the latter would be adopted.

If it is, then the cost of maintaining the general standard of living falls partly on an uncertain proportion of the workers, who have to accept a much lower standard of living on unemployment allowances, and partly on the general body of taxpayers who have to provide these allowances to unproductive workers. Prices are not lowered, exports are not stimulated, and at a time when trade is *ex hypothesi* bad the budget burden is increased. If the pressure is severe enough, theoretically a crisis can be produced which will make it impossible to raise revenue sufficient to cover necessary expenditure. The smooth working of the whole process, on Mr. Long's own reasoning, depends on the raising of the annuity out of taxes, that is, on the maintenance of a strictly balanced budget, and the cycle would be broken at this point. The currency would break down unless something were done to relieve the situation, and, under the normal working of the plan, relief would come from a cessation of transfers and the return, by one method or another, into the German economy of the capital withdrawn for the purpose of transfer. It is perfectly true that on this analysis the breaking point would first appear in the budget and not in the economy, but the break would be due not to the impossibility of raising a given amount of taxation, but to the attempt to export the capital. A position might, in fact,

arise when the taxation could perfectly well be borne by the community if it were directed to the support of the unemployed, but not if it were to be transferred.

There is nothing in the above which is in any way intended to suggest that events will, in fact, take the above course. The future evolution of reparation depends on Germany's and other countries' power to adopt themselves to the situation, and in particular on Germany's success in building up internal capital, in restricting imports and in increasing exports. The factors are complex and not capable of exact forecast. Mr. Long makes no attempt to estimate them, and indeed only refers to them as incidental to an argument designed to show that their estimation is of no importance. It may prove that the maximum burden of the plan is within Germany's capacity; that it is so, it is submitted, cannot be shown by the abstract reasoning examined.

Experience has yet to give an answer to the essential problem —Can a country with no comparable foreign assets effectively pay a large foreign debt which in no way represents value received, and to that end can the necessary adjustments be made in the various national economies affected?

A few words must be added on one of Mr. Long's subsidiary themes. His book contains an attack upon the Agent General for interference in German internal affairs. The attack is a paper one and overlooks the fact that the Agent Generalship, like any other organism created under a written Constitution, is living and will evolve in accordance with circumstances. Moreover, it seems peculiarly inconsistent on Mr. Long's part to attack the Agent General for drawing public attention—and this would appear to be the extent of his activity—to what appeared to him to be features in Germany's financial administration which endanger Germany's budget and Germany's credit. On Mr. Long's theory the transfer problem cannot arise so long as the budget is well administered and Germany's credit maintained; in other words, the only form which a concerted movement to defeat transfer could take would be the wrecking of the budget. On this view the Agent General is plainly justified in drawing attention to tendencies and policies which if further developed would in his opinion lead, albeit unintentionally, to serious budget difficulties. It is more in the interest of Germany than of any other country that if difficulties should arise there should be no suspicion that sounder financial management would have served to obviate them.

A. F.

REVIEWS

A Survey of the Social Structure of England and Wales. By A. M. Carr-Saunders and D. Caradog Jones. (Oxford University Press. 1927. Pp. xvii + 246. 10s. net.)

A volume of approximately 250 pages which contains 82 statistical tables might well be calculated to daunt a reader even if forearmed by the warning of the full title, that it is a survey "as illustrated by statistics." But while it cannot be denied that these pages require very considerable concentration of mind and even some endurance, the effort is well worth while. The authors have attained in large measure their objective of presenting "a coherent picture of some of the more important aspects of social life in this country," and if this seems qualified praise, it is so only in relation to the stupendous difficulty involved in their task. They speak of it as a pedestrian task, but while this is true in one sense, in another it is much more the task of the mountaineer who climbs laboriously to the top of Mont Blanc in order to register a panoramic view of the innumerable ranges and peaks. He will not see the detail of the valleys, and some of the mountain sides will appear unduly flattened, but he will have achieved what cannot be achieved by the mere pedestrian. Similarly, this book is a panoramic survey; and it must be taken as such. Just as no two mountaineers looking at the same view will give the same attention to its different features, so some readers may complain that in this book disproportionate attention is given to the various subjects; but there is really little to complain of in this respect when allowance is made for the inevitably personal point of view of writers and readers.

While it is well to stress its character as a survey, there is, of course, in reality a great deal of detail, as witness the 82 statistical tables! Indeed many a reader will find a secondary, though not we hope a primary, use for this book as a handy encyclopædia. From this aspect it is an unqualified success, and its authors will receive many blessings for their industry, and the admirable way in which the statistics are presented, together with the careful explanations as to what they represent, and the inferences which may and may not be legitimately drawn.

There is here no straining of too slender or untrustworthy data, nor are any "higher" statistical methods or terms used. On the other hand, the book ought not, of course, to be placed in the hands of a student who has had no training whatever in the elements of statistics.

To give some idea of the contents, it seems easiest to summarise the chapter headings. The first five chapters are devoted to an analysis of the population census; age, sex and marriage; housing; distribution; classification by industry and by occupation are the five sub-headings. The next chapter deals with industrial status and social class. The next two chapters concern occupational (trade unions and professional associations) and non-occupational (religious, political, etc.) associations. Then comes an examination of the National Income and the National Wealth, with particular reference to their distribution. The provision for Education naturally leads on to a consideration of juvenile recruitment to industry. Chapters XIII and XIV consider State provision against misfortune, and the compulsory transfer from rich to poor; Chapters XV and XVI the corresponding voluntary provision and transfer. Poverty and Crime are the next two headings, and the whole is rounded off by a discussion of the Inborn Qualities and Recruitment of the Population.

It must not be thought that this book is a mere compilation, and contains nothing which the general student of social economics does not carry as part of his equipment. There is perhaps no great contribution to the sum-total of human knowledge, but very few people will read this book without discovering several things which they did not know before, and many more to which they have hitherto paid inadequate attention. The precise subjects will vary with each individual, and since what most struck the present reviewer may be thoroughly familiar to others, it might give an unfavourable impression to present a personal selection. By way of criticism, or rather perhaps for the consideration of the authors when they come to revise for their second edition, as they will speedily do unless the first is very large, the following observations suggest themselves. In dealing in Chapter V with the census classification of skilled and unskilled workers, a little more cautionary explanation might be advisable for the benefit of the less advanced student as to the implications of the words skilled and unskilled. One is inclined to wonder whether there is any large occupation to-day which is really unskilled in the sense that a man can attain a normal

output virtually from the day he begins working. Equally there is surely little doubt that semi-skilled work has displaced really skilled to a very considerable extent. By confining themselves to the inadequate statistical material available, the authors do not make their survey produce a true and complete impression on this point. Similarly, in Chapter VI a wrong impression of the scale of modern industry results from the same sort of limitation. They rightly say that the average of twenty-four employees to every employer does not mean much, and that what is wanted, namely, the mode, is not available; but then they proceed to tabulate the averages for different districts and different industrial groups. Nowhere is there any indication that in many industries the typical firm employs hundreds and sometimes thousands of employees. Though exact information is lacking, some approximations could perhaps be obtained for certain industries, such, for example, as coal-mining or engineering. The lack of a true impression of the real concentration of control in modern industry may be deemed by some to be a serious omission; also in the discussion as to the existence of social classes which ends the chapter. The last sentence of this chapter perhaps overstates an otherwise sound warning, and in any case the summary nature of the previous discussion hardly warrants so definite and comprehensive a conclusion on such a very difficult and elusive matter.

Chapter IX on the National Income will probably want considerable revision in the light of the results of the census of production. Judging by the preliminary reports, most of which have, of course, appeared since the date when the bulk of this book was written, the estimates of Professor Bowley, Sir Josiah Stamp and others will have to be revised in an upward direction. The error is, however, probably greater in respect of the magnitude of the income than of its distribution, which is rightly the main interest for this survey. In Chapter XIII it seems strange that no mention is made of industrial accident insurance alongside the other branches of the State provision against misfortune, although the State does not, of course, directly contribute: a word of criticism as to the unco-ordinated and illogical nature of all this provision might not have come amiss. In the discussion of poverty and poverty standards in Chapter XVII, a more definite warning should have been issued that the typical family does not now consist of father, mother and three dependent children; and some attempt might have been made to adjust the Rowntree and Bowley data accordingly.

Finally, a most tentative suggestion may be put forward that a chapter summarising the bold outlines of the present structure, together with their historical antecedents extending back over, say, the latter half of the last century, would supply a perspective which is a little cramped by the general limitation to immediate pre-war or post-war comparisons, and might add to the coherent strength of the picture as a whole.

J. W. F. Rowe

Social Economics. By Friedrich von Wieser. Translated by A. Ford Hinrichs, Assistant Professor of Economics, Brown University, Rhode Island, with a Preface by Wesley Clair Mitchell, New York. (Allen and Unwin. Pp. 462 + Index and three Prefaces. 20*s*. 1927.)

If an English economist were asked to name the leaders of the Austrian School of Political Economy, he would probably name Carl Menger, Eugen v. Böhm Bawerk, and Friedrich von Wieser. All are now gone from us, Wieser last of all, in July 1926. After a lifetime devoted to the theory of marginal utility (to which he gave the new German name of *Grenz-nutzen*) he became more absorbed in problems of social philosophy and current politics. Witness, *e.g.*, his *Oesterreich's Ende*, "Passing of Austria," 1919, and his *Gesetz der Macht*, 1925.[1] The present book is a translation of the second edition of his *Theorie der gesellschaftlichen Wirtschaft*, published in the year before his death. It had first appeared in 1914. The Great War rolled between; and the author felt himself unable to recast his book altogether, consoling himself, as well he might, with the reflection that even those great changes have left economic principles still valid (trans. p. vii). He adds, in a passage omitted by the translator (W.'s Vorwort, p. viii of original): "The supply of theoretical books going to the bottom of the subject is very small, the need of them very great." In fact the best known were his own and Böhm's. In essentials the two were agreed; they differed most over the details of "Zurechnung," the assignment of the due share of each part in the value of what Mill called "the peculiar case," Jevons the normal ordinary case, an article involving joint cost of production. Böhm good-naturedly devotes an Excursus of 35 pages to this dispute.[2] They make the most of their differences. Wieser, in an article written for the first

[1] Other such writings are mentioned by Dr. Oscar Morgenstern in his obituary of his old professor (*American Economic Review*, December 1927).

[2] *Kapital und K. Zins.* 4th ed., 1921, Sect. II. Vol. II. 127-61. Economic Journal, December 1921, p. 569, where "and" should be "und."

number of this JOURNAL (1891, 108 seq.) admits general agreement, and repeats the admission here (translation, p. 74, original, 56). To some of us it appeared that Böhm's style improved with age; if his discussions were longer, his sentences were shorter. Of Wieser this seemed less true, if true at all. Professor Schumpeter's judgment is that of a friendly but just critic; his hero (he says) "is one of the few examples of clear thinking not implying concise writing." [1]

It is a standing complaint against the Marginalists that they spend too much time over the Elements. The greatest writer is not always he who writes the longest book. To learn a new science is so far like the learning of a new language that we must in both cases begin with the alphabet. But all knowledge is not contained in the alphabet; and even Wicksteed perhaps kept us too long there. The Austrians have shared in this prolixity, and the success of their writings on the Continent was a proof that at first at least the prolixity was well-timed. The translations of Böhm and of Wieser, for which Professor Smart was responsible, were well received here and in America; and the protagonists of the Austrian School were frequent contributors to English and American journals.

A complete sketch of the book before us is given in the *American Economic Review* (above cited, pp. 671, 672), and our task is not to set forth the doctrines but to estimate the value of the translation.

There are not many misleading oversights or misprints. The misprints (as on pp. 125, 137, 167 *bis*, 175) are not misleading. "Periodically" for "legally" on p. 162 seems indefensible. Wieser surely meant "Bourgeois economics" on p. 114, where the translation has "the economic theory of business-enterprise." In the author's Vorwort (viii, tr. xviii) "undurchsichtigen und schwankenden Zustand" is not happily rendered "the opaque and transitory condition (of the world after the War)." Perhaps "perplexing and unstable" would be clearer. On p. 80 (orig. 60) "freien Ueberflusz" seems more than "free good"; it is a free *surplus*.

The device of breaking up sentences has been successfully practised in the early part of the book where it was most needed. In the later part, say in Book IV, "Theory of the World Economy," the sentences run easily without it. The author himself is often to blame for difficulties of meaning still left. Wieser, for example, speaks of the "idealising" method where

[1] In this JOURNAL, Obituary, June 1927, p. 329.

English writers speak of the method of abstraction (Introd., tr. p. 5, cf. 153 and *passim*). This is no harder in translation than in the original, and we take up the point once for all. The following passage is no easier in the original than in the translation. The latter runs: "Socially the motor stimuli are discharged at the expense of enormous friction during great popular movements and spiritual outflow." It would be simpler to render motor stimuli "impulses to action." Wieser writes "die motorischen Reize" (orig. p. 17, cf. tr. 18, 19) and for "spiritual outflow" tr. *ib.*, "geistigen Strömungen," surges of thought. So (on p. 49) "cost-productive-means" is neither better nor worse than the original (orig. p. 38). On p. 23, ft. in the tr., the translator has missed an easy chance. He writes: "If we may say so, the prevision of the need of food is more voracious than hunger." "Provision" is surely more ordinary English than "prevision," for the German "Vorsorge"; and the whole might run: "The provision of the food is hungrier than the hunger itself," Wieser's phrase being "hungriger als der Hunger" (orig. p. 21).

It must be confessed that the book reads like a translation. As it is written in the first instance for the States, we must remember that long words (in place of our shorter) do not always offend there; but in many cases the long words are a too faithful repetition of the original. The following example does not stand alone: "The motor need is satisfied in the expenditure of energy. In extreme cases it is exhausted by fatigue. The economic need reaches a condition of satiety when a sufficient quantity of instruments of its satisfaction has been absorbed" (p. 22).

Enough has been said to show that the translation will not please all Englishmen, or (in spite of Mr. Wesley Mitchell's Preface, p. xii) all Americans. Some of us at least, while acknowledging help from it in the interpretation of obscure passages, will grudge the need of learning a new language, the language of the translation itself. Good translation, however, is no easy matter; and the translator has evidently tried bravely to find the right equivalent where the wrong might imperil a whole argument.

J. BONAR

Central Banks. By C. H. KISCH and W. A. ELKIN. (Macmillan. Pp. 384. 8*s*.)

THIS is a book on a new subject. Classic works exist on Banks of Issue in general, and on particular Central Banks. But the subject of Central Banks as such is a novelty.

The book is primarily descriptive. More than half of it (pp. 155–368) is composed of an Appendix containing a summary of Laws, Charters and Statutes regulating Banks of Issue. Dealing with twenty-eight different countries, this by itself will be a most valuable work of reference. A clear and accurate summary of such multifarious and voluminous enactments is something of an achievement.

The body of the book is composed of an exposition of the purpose and manner of working of the various regulations and arrangements to which Central Banks are subject. The method is comparative. Each chapter takes one topic, and shows the different methods by which the same problem has been dealt with in different countries.

An introductory chapter explains how the necessity for a Central Bank has arisen. The regulation of the currency has become dependent upon the regulation of credit. "The rate of discount is the chief weapon for ensuring the due proportion between the volume of credit, the note issue and gold holdings, and thus for maintaining the stability of value of the currency unit, and . . . the rate of discount is properly the instrument of a bank."

Also "Monetary policy should be independent of political contingencies, and the surest way to secure this result is to place the control of the note issue in the hands of a bank."

"The gold standard is sometimes spoken of as an automatic system. The phrase is in the highest degree misleading. Whether there is a gold standard or not, the control of the credit and monetary system involves the solution of many difficult problems of policy and detailed administration."

Chapter II is devoted to the relations between the State and the Central Bank. The authors quote, but not without qualification, the prevailing view in favour of the independence of the Central Bank. They show that there are only two perfectly independent Central Banks—the Bank of England and the Reichsbank. They also point out that in great emergencies the theoretical independence of the Central Bank cannot really prevail against the Government. "The danger of State control of the currency lies in the temptation to a Government to treat its political difficulties as justifying a course of action only permissible in an emergency of an entirely different order" (p. 26). This may be called the orthodox view, but it is not clear that there is any adequate foundation for it in history. When a Government goes blundering on from deficit to deficit, an inde-

pendent Central Bank has no right to interfere till the Minister of Finance asks for an advance, and by that time the situation is likely to be past praying for. It may be theoretically true that "the existence of restrictions on Government borrowing from the Bank strengthens the hand of that body in exerting influence on the Government to pursue a policy of financial prudence." But has this ever actually occurred? And is there not some advantage in having the administrative officers responsible for the regulation of currency and credit in a position not merely to "exert influence" on the Minister of Finance, but to play a direct part in the consultations by which his decisions are formed? That is the system which has made the Indian currency administration the most successful and the most scientific in the world.

The third chapter of the book deals with capital and profits. Here there is a fundamental antinomy. For the State to own the capital would infringe the principle of independence. On the other hand, if the shareholders receive the profits, can the Bank devote itself disinterestedly to the public advantage? The Federal Reserve Banks have reduced their earning assets in order to sterilise gold. "No bank organised primarily for profit could afford to adopt a line of action which is so unprofitable from the point of view of dividends" (p. 74).

An important chapter deals with Note Issues and Reserves. The authors indicate the weak point of the proportional system of gold reserves in comparison with that of the fixed fiduciary issue, that is to say, the greater disturbance arising from an export or import of gold when it carries with it a greater change in the right of note issue. This does not apply at present to the United States, because "the reserves actually held are so largely in excess of the statutory requirements that substantial withdrawals of gold can take place without entailing contraction of the note circulation in the theoretic proportion of 100 to 40."

In the treatment of the relations of the Central Bank to other banks and to the money market, perhaps hardly adequate prominence is given to the use of the Central Bank as a basis for clearing. "The very idea of a Central Bank presupposes that the commercial banks will deposit their cash resources, other than till money, with it" (p. 101). In practice, if adequate rediscounting facilities are available, these cash resources are not required for any other purpose than clearing (unless, of course, reserves are required by statute, as in the United States). The peculiar provision of the Australian Commonwealth Bank Act making clearing through the Commonwealth Bank *compulsory* might have

been made clearer both in the body of the book (p. 137) and in the Appendix.

The book ends with an interesting discussion on the co-operation of Central Banks. R. G. HAWTREY

Industry and Politics. By the RIGHT HON. SIR ALFRED MOND, Bart., LL.D., M.P. (Macmillan. Pp. ix + 337. 12*s.* 6*d.*)

THE essays in this volume are concerned chiefly with unemployment, industrial organisation and fiscal policy. Lord Melchett tells us in his introduction that he has published them, not because they are "as complete or consecutive, either in form or expression," as he would have wished, if he had had more time to devote to their elaboration, but because "they embody a good deal of thought and research on a number of . . . important problems of to-day on which, I think, my personal experience entitles me to speak with a considerable measure of authority." Both as regards form and as regards substance we may agree that his judgment is just. It would be a sympathetic critic, indeed, who would attribute great literary felicity to Lord Melchett, but the eminence of his position in the world of industry and the weight of his influence in political circles are ample compensation for the slightly viscid qualities of his style, and make any comments he has to offer important data for the interpretation of the economic and political tendencies of our time. This is not an attractive book. But it is a forceful book, a revealing book, a book which no student of the post-war period can afford to neglect.

Lord Melchett's main proposals in regard to unemployment are already well known to readers of this JOURNAL. In this book he renews his plea for their adoption, and attempts to turn the tables on those critics who have accused him of wishing to revive the Speenhamland system, by an heroic effort to prove that that system was not as bad as it has been painted, and that in any case it did—what he claims would be the effect of his own plan—ward off graver troubles in the body economic. Whether this last is true is a matter which may be left for economic historians to answer. But in his main contention, that his scheme has not received the attention it deserves, Lord Melchett is not, I think, without some justification. As Professor Pigou has shown, there are conceivable cases in which such measures would not be without some theoretical sanction. In any case they are sufficiently ingenious to merit more respectful considera-

tion than they have received at the hands of most of their critics. But it is somewhat surprising that Lord Melchett should accuse his opponents of a purely static conception of industry (p. 101). For certainly the most powerful objection to his scheme is precisely this, that it itself is too static in conception. It assumes static conditions, and it would tend to perpetuate such conditions. "The scheme would apply," says its author, "in all insured industries in which the unemployment figures were above normality." That is to say, that in just those industries where the downward fluctuation of demand for labour was most pronounced, and where presumably a contraction of labour supply was most called for, the greatest effort would be made to maintain the volume of employment undiminished. Surely this is the static outlook with a vengeance. Lord Melchett complains elsewhere (p. 46) that the present system of unemployment relief promotes immobility of labour. But if relieving people who are thrown *out* of their jobs produces this result, how much more will subsidising wages so that they may remain *in* them?

On questions of industrial organisation, Lord Melchett covers a varied collection of topics with a success which is almost equally varied. On the rôle of science in modern industry he speaks with imagination and vision. His views, too, on the relations between capital and labour are humane and progressive. The celebrated attack on socialism, on the other hand, seems scarcely to deserve its reputation. As a debating speech it may have been effective. As a contribution to knowledge it is disappointing. Lord Melchett claims that his remarks on the difficulties of international trade under socialism are new, but this, of course, is erroneous. The matter has been discussed both by Cannan and by Mises. Nor does his treatment of that great movement of amalgamation, which he has done so much to forward in this country, justify the high expectations with which we approach it. Trite reiterations of text-book lore with regard to the advantages of large-scale organisation take the place of that comparison of the advantages of *different* scales and *different* forms of organisation which we should expect from one with so intimate a knowledge of these matters. And this deficiency is all the more disappointing since, in treating of socialism, Lord Melchett showed himself to be not unaware of the difficulties in question.

"What is one of the real difficulties of the whole question of organising your industries nationally?" asked Lord Melchett. "One of your chief difficulties is magnitude. I have come deliberately to the conclusion that it is quite impossible for

human beings to control any industry beyond a certain magnitude, and I say that after careful study.

"It is a very curious fact, told me by an American friend, that under Mr. Roosevelt's administration, when one of the American trusts was dissolved, the component parts of the trust made more money in competition with one another than when united, simply because it had outgrown proper economic management and become so large that the company was like a government department, so complicated and so full of red tape that paralysis set in."

Surely, having thus whetted our appetites, Lord Melchett might have discussed the matter further. We cannot without undue optimism infer that the optimal magnitude of organisation in the chemical industry will *always* lie between the extent of a national chemicals trust and Imperial Chemicals, Ltd.!

On fiscal policy Lord Melchett is frankly mystical. With pious awe he sacrifices "the free trade ideas to which I have, economically, (*sic*) devoted the greatest part of my political life" "on the altar of Imperial Unity." With righteous scorn he denounces those who "think of everything in terms of what might be called European thought." In such a case, clearly, comment of a strictly scientific nature is inappropriate. We may question whether the means proposed—Imperial Zollverein, a quota system and the like—are likely to promote the end in view. (Incidentally, we may note that Lord Melchett does not think the bonds of race are sufficient without "mutual interest.") But in so far as the ends are in dispute, as economists, we can say nothing. If Lord Melchett prefers Empire to Opulence, that is the end of the matter. But is it not rather sad that Lord Melchett, whose own debt to the mainland is so obvious, and whose great race has done so much to foster the consciousness of a common tradition of Western civilisation, should forsake the goodly company of those who have sought to strengthen the solidarity of European peoples, and should find the outlook of those for whom the interests of such solidarity are paramount, so mean-spirited and ignoble?

LIONEL ROBBINS

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The Economic System. By G. D. H. Cole. (Longmans, Green & Co., Ltd. 1927. Pp. 90. 2*s.*)

Capitalist Combines. By G. M. Colman. (Longmans, Green & Co., Ltd. 1927. Pp. 90. 2*s.*)

Co-operation, its Problems and Possibilities. By A. H. Enfield. (Longmans, Green & Co., Ltd. 1927. Pp. 90. 2*s.*)

These three brief "outlines," published under the editorship of a Joint Committee of the Workers' Educational Association and the Tutors' Association, give a concise and lucid explanation of their subject. The editors are perhaps a little sanguine in their belief that the outlines are suitable for "independent students who want not to be told what to think but to be helped to think for themselves." The authors have so obviously a gospel to preach, and so evidently expect it to be agreeable to their readers. Mr. Cole, at any rate, is frankly "conscious" that his exposition "begs many questions." Miss Colman and Miss Enfield are less frank, probably because they have not realised that there are so many questions to beg. Miss Colman does indeed begin with the statement that "there is much both of good and of bad in the combination movement," but her description of the social gains of combination is quickly followed by the social dangers of monopoly and inflation. A simple arithmetical sum shows that the capital of "Imperial Chemical Industries" is larger by over £18,000,000 than the combined capital of the four constituent companies : it follows that the capital is watered and the new combine over-capitalised. As regards wages, although "it is difficult to find evidence on the basis of which to come to any definite conclusion," yet "there is no doubt that a combine is in a better position than smaller independent firms to resist a demand for a rise or to enforce a reduction." The Press combines and the banking amalgamations are condemned with equal severity. With regard to the latter, Miss Colman does indeed admit that "in general no doubt loans are given or refused on purely business principles," but this power can be used to check developments of which bankers disapprove, as, for example, trade with Russia. A brief account of the various attempts made in different countries to control the activities of combines shows how difficult it is to make such control effective, and leads easily to the conclusion that the only adequate protection to the consumer or the worker is to be found in State ownership and administration of capital.

Miss Enfield has a less controversial subject in Co-operation,

and her exposition is mainly descriptive, passing in review the origin of co-operation, the British movement with its secondary educational and political activities, and the importance of international co-operative trade. The problems arising out of the relation between agricultural co-operators who aim at selling dear, and consumers' co-operators who desire to buy cheap, are somewhat lightly passed over, the writer contenting herself with the view that "though the respective spheres of the two movements have never been settled in theory, co-operators are essentially practical," so that no doubt matters will arrange themselves. The conflict of interest between producers and consumers is more clearly realised in the chapter on Co-operation and Trade Unions, and the conflict between the aims of co-operators and State socialists forms the subject-matter of the concluding chapter. For her new world Miss Enfield gives the preference to co-operation, as at once more democratic than State socialism, more trustworthy, and more international in its sympathy and outlook. The book starts quite definitely from the premise that capitalism and profit-making are vicious in every detail, though there are in the argument occasional lapses, evidently unsuspected by the writer, as, for example, when capital provided by the savings of Trade Unionists appears to have a right to adequate returns, and again where it is indicated that the highest technical efficiency and great business and organising ability are qualities not secured by election.

The Economic System, by Mr. G. D. H. Cole, is a more scholarly and less ingenuous production, but the exposition is uneven, and suffers from the difficulty of explaining complicated questions in a few paragraphs and in language intelligible to the student who has not much background. Thus the chapter on "Legal Foundations" settles in nine pages the whole question of the "rights of property" and of "legal personality." It is cleverly done, and the student for whom it is intended will find it as intelligible and convincing as any other piece of socialist propaganda. The two chapters on Capital suffer even more from compression. After explaining the meaning of capital assets, the argument plunges straight into questions of companies and investments which may well confuse the reader. On p. 28 *real capital*, italicised, is defined as the "actual worth of the assets with which business is carried on," but on p. 33 we are told that firms may have a "large part of their real capital in the form of Debentures." The writer is more clearly at home in his description of the provision of capital, and of the possibilities of saving

under a more equitable distribution of resources. A somewhat tedious chapter is devoted to proving that cost of production has no precise meaning, and it appears to follow from the chapter on " Social Cost " that there is no such thing as a right to interest on capital. The chapter on Wages concludes that the " worth of labour " under our present economic system has no moral meaning. " It does not mean that labour is paid what it ought to be paid." The " necessities " of the economists, as regards wages, prices, interest and profits, are necessities only under the present economic system, and Society could very well reorganise the whole system on some other basis. With this, as with the conclusions of the other two volumes, the student for whom they are intended will doubtless agree, and even the more sophisticated reader may find the " outlines " interesting if not altogether convincing.

H. REYNARD

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Economic Problems of Modern Life. By S. HOWARD PATTERSON and KARL W. H. SCHOLZ. (McGraw-Hill Publishing Co., Ltd. 1927. Pp. xii + 607.)

THIS book seeks to combine a generalised description of modern economic organisation with a more detailed treatment of some of the important social and economic problems which face the U.S.A. at the moment. That duality of purpose is to be regretted, for a text-book and a gospel are not easily welded. The interest and continuity of the treatment of unsettled questions is broken by the intrusion of much standard description and principal; the value of the text-book is reduced by the presence of discussions in which only the first words have been said. If one fails, however, to find a continuous thread throughout this work, the sections stand well by themselves. They are well written; concise almost to the point of over-concentration. The material has, to all appearances, been carefully collected and sifted. The authors are happy in their skill in putting both sides of a case crisply and succinctly, and they add to their capacity for balanced statement an intellectual withdrawal from bias or over-emphasis which makes their work a first-rate study of present-day industrial America.

The general problems of industry in the U.S.A. differ both in kind and degree from those found in Europe. The differences are

the result of social as well as purely industrial factors. A European writer on Socialism, to take a most apparent example, would be justified in assuming that his readers have a rough idea of what principles lay behind Socialism and what ideas had been attached by hostile and prejudiced minds. Not so in the U.S.A., where the authors of this book find it necessary to explain that "Socialism does not propose the elimination of religion, the Church or the institution of the family." In some directions the economic problems of the U.S.A. are simpler than those found elsewhere. The high general standard of wages does not altogether cloak or destroy the problem of industrial relations or the distribution of wealth, but the organised section of labour is highly prosperous and the ill-paid section is mute and unorganised. The problem of instability presented by an unco-ordinated and decentralised banking system has been successfully met by the Federal Reserve Act of 1913. The absorption in the task of creating a satisfactory political system in which Federal power and State power would be nicely adjusted has perhaps diverted attention from the regulation of industrial society and the establishment of democracy in the economic field. Rapidly increasing wealth weans a nation from introspection; its industrial worries lie lightly. Readers of this book, however, will be left in no doubt that industrial prosperity is a thin cloak and liable to wear to tatters quickly unless carefully watched and mended. Big questions are emerging in the U.S.A. which will tax even the ingenuity, capacity and flair for organisation and direction which are met there. Sooner or later the American people must decide how far their present policy of protection, their refusal to cancel war debts, their encouragement of exports, their firmly rooted desire for a favourable balance of trade, are compatible with their change from a debtor to a creditor country. In some vital chapters in this book Messrs. Patterson and Scholz desert, perhaps for the only time, their attitude of reserved balance and come out in robust support of a greater degree of Free Trade for the U.S.A., and even seem to be in support of some measure of cancellation of Inter-Ally debts. The problem of the Trust is becoming more complex. The lawyers have always fought a losing battle with the business man, for the latter combines superior dexterity and energy with the possession of an organisation which is capable of an infinite capacity to change form in order to evade the law. The State is now adding to ineffectiveness in control an uncertainty in its own cause. The Webb–Pomerene Act allows the formation of associations and combines

which are engaged solely in export trade. On this subject the authors unfortunately confine themselves to description and, excepting a suggestion that the Federal Trade Commission should have the power to fix prices, refrain from criticism or analysis. A flexible tariff scheme now in operation appears to prejudice the export trade of the country and to incite other countries to retaliation. And the social problems appear to be no less urgent. It comes as a surprise to learn that "in 1920 there were one million children between the ages of ten and sixteen engaged in American industry"; that six States still allow the employment at night of children under sixteen; that, as the result of a survey covering 19,000 women in Virginia in 1919, 46 per cent. were found to be working more than ten hours per day. Moreover, the political organisation of the U.S.A. makes the problem of social legislation an extremely delicate task. There is a twilight zone in which Federal and State authorities struggle for supremacy. A written, and therefore rigid constitution, is badly adapted for dynamic industrial conditions. The whole treatment of this subject is a first-rate antidote to much uninformed laudation of American organisation and industrial life.

The authors, however, do not confine themselves to this one thesis. To English minds the relative space allotted to different subjects will seem unusual and largely reflects the difference in the industrial centre of gravity in the two countries. There are only 21 pages out of a total of 600 devoted to Trades Cycles; only 2 pages to the Joint Control of Industry. A comparison of municipal ownership in the U.S.A. and Europe is dismissed in 1½ pages. Some of the discussion is topical enough to leave the writers at the mercy of current events. It is no longer true that "in G.B. the miners have secured a seven-hour day and are agitating for a six-hour day." It is misleading to state that "the significance of Trade Unionism in British political life may be illustrated by the fact that in 1920 Trade Unions possessed a membership of 8,000,000" when that number has now fallen to about 5,000,000. Guild socialism is discussed as a living and militant force, when even its most able and enthusiastic exponents in this country appear to have deserted it. The book contains a useful and wide list of references, but on the subject of the Trade Cycle the works of Robertson, Pigou, Lavington, Cassel and Veblen are omitted. It is perhaps captious criticism to suggest that the ugly word "illth," used at least three times in this volume, should have been allowed to die with Ruskin.

The authors have carried through what must have been an

onerous task of compilation and interpretation in a highly commendable manner.

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Principles of Marketing. By FRED. E. CLARK, Ph.D. (New York: The Macmillan Co. 1925. Pp. xiii + 570. 12*s*. 6*d*.)

THIS work is a well-balanced presentation of those phases of marketing that rest upon accepted economic teaching. It is authoritative in tone and is marked by great fairness and thoroughness in its handling of those aspects which do not readily yield to theoretical generalisations or are still debatable ground between rival American schools in this branch of economic science. The author does not anywhere explicitly discuss terminology; but by defining marketing as consisting "of those efforts which effect transfers in the ownership of goods, and care for their physical distribution," he ranges himself on the side of those who make the term include the entire group of services involved in the distribution of goods from producer to consumer. This is a better course than attempting fine-drawn distinctions between the distributive problems of the producer on the one hand and those of the factor, wholesaler and retailer on the other and applying the term merchandising to the latter. While the distributive problems of the producer may be different from those of the wholesaler and retailer, the increasing tendency for producers to aid and even to supervise the flow of their goods right down to the consumer makes the distinction between the two an unessential one for the economist. It would be well, however, to recognise the need for standardised terminology in this connection.

The book includes chapters on the distribution of farm products (applicable in the main to American conditions only), of raw materials and of manufactured goods, with full discussions of the problems involved. Finance, risk, market news, standardisation, co-operation, all find a place; and the chapters on the elimination of middle-men and on price maintenance are specially commendable.

Equally so is the absence of long discourses on what is known as salesmanship and on unscientific mass psychology which often spoil much that is otherwise good in works of this kind. Throughout there is emphasis on the need for the study of the social significance of marketing; and the concluding chapters devoted to the elements of marketing efficiency, the cost of marketing and

criticism of the wastes of competitive selling are useful contributions on topics of interest to the social student as well as to the business man and the economist.

The general conclusion of the book is eminently sensible. " So expensive a part of our industrial mechanism as the marketing machinery . . . is an intricate and delicate mechanism, and change should develop only from investigation and experience."

J. G. SMITH

The Finance of Foreign Trade: a practical guide to the operations of Banker and Merchant. By WILLIAM F. SPALDING. (London: Sir Isaac Pitman and Sons, Ltd. 1926. Pp. xi + 179. 7*s*. 6*d*. net.)

MR. SPALDING quotes in the introduction to this volume the remark of an importer, " Why don't some of you bankers put your cards on the table and write a book that will give us information on the procedure to be followed to get our trade financed ? " This book is the author's answer to such queries, and the point of view adopted is to assist merchants and shippers in their work. The earlier chapters deal with the various kinds of credit employed, the differences between them, and the way in which they are operated; attention is given both to the export and to the import trade from the standpoint of London and to the difficulties of financing in foreign currencies. Chapter VII marks the change over from general discussion to the consideration of how trade in particular commodities such as South Wales coal is actually financed, and of how the trade with particular areas is dealt with by bankers. Among the regions chosen are Morocco, British West Africa, Central and South America, British India and China. The book closes with chapters upon loans and advances, credit information, and the British export credits scheme.

This is undoubtedly a useful and well-written introduction to the practice of the financing of overseas trade; much of its detail comes from the wide and notable experience of actual trade transactions which its author has enjoyed. Further, Mr. Spalding is writing, as he clearly states, for the advice of business men. The book is not, therefore, to be regarded as a systematic account of how British foreign trade is actually financed, nor does it give an adequate account of the relations between credit organisations and traders to those who may desire to judge if these are effective and satisfactory in furthering the interests of British trade. Within its own limits, however, it is a desirable contribution to the somewhat sparse literature of an important subject.

R. B. FORRESTER

Railways versus *Roads*. By E. H. DAVENPORT. (London General Press. Pp. 24. 1*s*.)

THE rapid development of mechanical road transport has brought the problem of road and rail co-ordination to the fore. In the past there was a more or less clear demarcation between the two methods of transport, but at the present time the sphere of the road motor cannot be determined with exactitude owing to the gradual improvements which are taking place from year to year. Everyone would agree, no doubt, that unnecessary overlapping is wasteful and that a scheme of co-ordination which would provide for the " rationalisation " of transport has much to recommend it. The difficulty is to find a scheme which would secure the advantages of co-operation without checking the legitimate development of the new method and without hurting the interests of the consumer.

Mr. Davenport envisages the problem from the point of view of the railway stockholder, though it is only fair to mention that he does not altogether neglect the wider interests involved. He sees the solution of the problem in the railways going out on to the roads and providing services in connection with their rail facilities. He rightly points out that road and rail are partly complementary, and he admits that motor transport must have created a good deal of the traffic now carried on the roads. The railways have gained indirectly by the opening up of the country and directly by the carriage of road metal, asphalt, petrol, motor materials, etc. Whether or not this has been sufficient to counterbalance traffic lost to road competitors is open to argument. Mr. Davenport considers that so far it has, though he is more doubtful if this state of affairs will continue. The railways, he holds, must join in the forward movement or lose their leadership of the transport industry, and for this it is necessary that they should have powers to operate road motors. He admits that provisions would have to be made to guard against district monopolies, which would never be tolerated by the public. The railways should be prepared to carry local passenger traffic by road services, and buses should be used to link the market-places of towns with the main line stations. Combined rail and road tickets should be an advertised attraction. For goods traffic he suggests that transhipment depots could be eliminated in many cases by substituting road services between country stations and central depots. If adopted on a more general scale this would undoubtedly enable the railways to secure important operating

economies and to speed up traffic. Mr. Davenport goes on to approve of the suggestion that in certain cases motor lorries could themselves be entrained so as to avoid transference of their contents during the journey. This, however, seems an unnecessary duplication of power units. Why not use containers or demountable bodies?

In the concluding sections of his pamphlet the author considers the question of highway rates and offers suggestions for their apportionment between ratepayer and road user. He does not think that the railways are unfairly treated in the matter of highway rates.

Mr. Davenport has written a useful pamphlet which should be read by all interested in the road and rail problem.

K. G. FENELON

Edinburgh University.

Les chemins de fer en Belgique. Par GEORGES DE LEENER. (Bruxelles: Maurice Lamertin, editeur. 1927. Pp. 249.)

QUITE one of the features of post-war reorganisation in belligerent countries has been the change in status of certain of the world's chief railway systems. Professor G. de Leener takes as his subject the past history of the Belgian railways, the constitution of the new Société nationale des chemins de fer Belges, and its prospects for the future, but the entirely unexpected change brought about in the summer of 1926 by the Belgian decision to commercialise the operation of the State-owned system forms the major topic of the book.

His broad historical thesis would appear to be a specialised proof of the generalisation long ago put forward by the German writer Gustav Cohn, that "the advantages and drawbacks of every possible system may have been never so impartially discussed, yet in the end the traditions and the difficulties, the existing political and economic conditions of each country, have had the last word." Herein it is demonstrated that "the whole history of Belgian railways shows the adaptation of their operation to the circumstances and exigencies of the moment" (p. 199). In 1834 it was not abstract economic theory but largely the fear of Orangist capital control and the practical need of cheap rates in competition with three neighbouring maritime nations for German trade which led the infant State to reserve railway construction and operation to itself. Ten years later the growth of native capital had removed the chief danger and, moreover, the main trunk lines of the period, from which it was intended that others

might radiate, had already been constructed. Hence, until about 1870 the extension of the system was abandoned to numerous private companies. In 1873 there began a period of State repurchase, again from fear of foreign control, this time from France and Germany. In 1926 the necessity of mobilising the national assets to stabilise the precarious position of the Belgian franc, threatened by a huge floating debt of maturing Treasury Bonds, brought about the transfer of operation (but not ownership) to the new Société.

However, Professor de Leener is concerned chiefly with the technical constitution and problems of the new régime. Students of transport questions will welcome the opportunity of obtaining his authoritative short history and description of this important experiment. Whilst the urgency of using national assets as a basis for national credit and stability is the main prop on which he builds his not unqualified support of the change, the harrowing description of the particular evils of State operation in Belgium and the difficulties attendant on all efforts to obtain some measure of commercialisation at least add to his conviction. The Société nationale is referred to in Article 13 of the 1926 law as an "autonomous industrial enterprise" (*entreprise industrielle autonome*), but to the foreigner, among other things, the fact that the State has at least 80 per cent. of the voting strength in the extremely powerless general meeting of shareholders (assemblée générale), that the majority of the directorate (conseil d'administration) is nominated and dismissed by the Government, and that the Government may always require reductions of rates or forbid increases seems to indicate some degree of elasticity in the normal use of words, as our author is prepared to admit (p. 212). In this respect his critical analysis of its constitution inevitably leads to the conclusion that everything depends on mutual co-operation by the directorate, the Government and Parliament to "prevent the vices of the system being translated into facts" (p. 213). Broadly speaking the floating debt has been forcibly consolidated into the preferred shares of the Société, on which the State pays a reduced fixed rate of interest. The net profits of operating the railway system on commercial lines are to be divided equally between the preference shareholders and the State, as holder of the ordinary shares.

The prospect for the future is naturally the most topical and debatable part of the book. The financial success of the undertaking may be made or marred by the degree to which the State burdens the administration with unhappy interference

possible within its constitution. Hence to some extent the problems of the Société are constitutional as well as economic, and it is here that the English reader must rely entirely on the author's native knowledge of Belgian customs, since written constitutions are extremely deceptive as a basis for gauging the future of new bodies, and we have had no long-standing experience of practical effects to estimate the value of his criticism. Nevertheless few will not be persuaded of the wisdom of certain practical arguments for improvement in the hurried imperfect arrangements. Economically the future would seem even more obscure, due to the nibbling of the road motor at the higher class traffic (on account of the short distances) and to the very complete inland waterway system lying in wait to prevent the burden of fixed costs being thrown on the lower class, as well as to the traditional dependence of the country on cheap rates. Though cognisant of the many difficulties, Professor de Leener feels assured of success given the essential of co-operation.

C. D. CAMPBELL

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Urbanisation : Its Effects on Government and Society. By JOHN GIFFEN THOMPSON. (New York: Dalton and Company. Pp. 683. $6.)

IT is probable that no change has ever taken place in the lives of the mass of the people so swift and so fundamental as that implied by the substitution during the last century of town for country as a place of residence. We are familiar enough with attempts to assess the meaning of factory life for those who work under modern conditions. There has, on the other hand, been little study of urban conditions in their relation to problems of government and the wider problems of social life. In no country is such study needed more than in Great Britain, where urbanisation has gone furthest. Mr. Thompson has taken up this task and conducted a detailed and careful survey of the general influences of town life with particular attention to problems of government. His verdict is in the main favourable. This view stands in strong contrast to that dominant in the older civilisations, when towns were regarded as the seed-beds of moral and physical decay in the individual and the centres of political corruption in the State. The experience of the war would seem to bear out Mr. Thompson's conclusion. The town-bred youths

of Western Europe showed no signs of degeneration in that trial. But this is not the place to pursue these broad problems. Mr. Thompson is not specially interested in the economic problems of towns. Here lies a rich field for research. Next to nothing is known of the relation between cost of administration and size of town in this country. Almost certainly there is such a relation. On the one hand there must be an optimum size of town, and on the other hand there is no reason to suppose that the growth of towns stops at that point. Town-planning is the first step in the control of the distribution of population; further steps are contemplated, but there is nothing to guide those who plan satellite towns as to the size at which they should aim.

A. M. CARR-SAUNDERS

The Bread of our Forefathers. By SIR WILLIAM ASHLEY. (Oxford: Clarendon Press. Pp. xii + 206. 12*s.* 6*d.*)

WHEN English people talk of bread, they mean bread made of wheat. It is only under the stress of a Great War that they can be induced to eat bread containing a mixture of other grains. This was already true by the beginning of the nineteenth century: schemes for the "dilution" of bread were no less unpopular during the Napoleonic wars than they have been in our own generation. There has, indeed, been a tendency to assume that English bread has always been made from wheat, and that, in attempting to measure historical changes in the cost of living and the standard of welfare, wheat may be taken to be the representative bread-corn, just as barley is taken to be the representative drink-corn. Rye, the main bread-corn of Northern Europe, has been almost ignored as a factor in English economic history; and this has not been merely an oversight. Thorold Rogers, indeed, expressly and repeatedly denied that rye was ever important as a bread-corn in this country. "From the earliest times" (he wrote) "wheat has been the principal grain on which the English have lived. . . . Rye was more scantily cultivated than any of the cereals . . . it almost disappears as a grain crop in southern and central England at or about the middle of the fifteenth century."[1] Yet, whatever happened in the southern and central counties, there is abundant evidence that a considerable amount of rye was grown in England as late as the eighteenth century, and that "the bread of our forefathers" was

[1] *Six Centuries of Work and Wages*, pp. 59-60. Cf. the passages in his *Agriculture and Prices*, quoted by Ashley, p. 86.

largely composed of this coarser grain. The monks, it is true, seem to have preferred wheaten bread from a very early date; but it is doubtful whether the monks should be regarded as among our forefathers.

The most important rye-growing region of England in the sixteenth and seventeenth centuries was in the eastern counties, especially Norfolk. Nowadays it is from the eastern counties that we derive more than half our home-grown supplies of wheat; and (wrote Sir William Ashley) " a large part of our problem is precisely this: when and how did Norfolk and the eastern counties . . . convert their rye-fields into wheat-fields, or bring under wheat land never before tilled?" To this problem Sir William Ashley applied the varied learning of a lifetime. The results of his researches into agricultural history, prepared for delivery as the Ford Lectures of 1923, now appear in his last book, which was completed only a few weeks before his death. The book bears eloquent testimony to the depth of Ashley's learning and the width of his interests; the range of authorities drawn upon, and the ease with which the centuries are traversed, alike reflect a mastery of general historical scholarship which is becoming ever rarer in these days of specialism. Pamphlets, letters, corn certificates, quarter sessions records, pipe rolls, field names, theological treatises, manorial extents, Saxon land charters, Shakespearian quotations, and even familiar nursery rhymes, are all used to throw light on the main question.

Some of Sir William Ashley's general conclusions may be conveniently stated in his own words (pp. 132–3): " Firstly, that a complete transition to a wheat bread diet on the part of the mass of the people was only effected during the eighteenth century; secondly, that there is reason to believe that the cultivation of rye was relatively more extensive the farther back we go in time; thirdly, that during the Middle Ages rye was cultivated to some extent in almost all the arable districts, and that in some it preponderated over wheat; and, fourthly, that throughout the Middle Ages it was a very important element in the rural life of the country, in the food of the people, and in the policy of the Government."

Thorold Rogers' under-estimate of the importance of rye is explained as arising from the nature of the evidence he used. The bailiffs' accounts, on which Rogers relied, refer directly only to the seigneurial demesnes, which constituted at most one-third or possibly two-fifths of the tilled soil of the country. Actually Rogers' evidence referred to a much smaller proportion of the

arable land than that; "for it is derived almost, if not quite, exclusively from manors belonging to considerable corporations, such as colleges and cathedral chapters, or belonging to considerable personages, such as the king or the great nobles." Even in the Middle Ages the bread-corn of these privileged classes was admittedly wheat; and it is therefore natural to find wheat predominating in the cultivation of the demesnes. Not only nobles and monks, but also the merchants and well-to-do craftsmen in the great towns were already, by the middle of the thirteenth century, beginning to demand wheaten bread; and accordingly, the predominance of wheat even in that portion of the produce sold by the bailiff in the open market does not prove that wheat was cultivated in anything like the same proportion over the country as a whole. This exposure of Thorold Rogers' fallacy is not, indeed, entirely new. Denton, Steffen, Savine, Seebohm and Cunningham have all (from one aspect or another) attacked the basis of Rogers' calculations. Ashley does not merely demolish Rogers, but builds up a consistent contrary doctrine by dovetailing detached pieces of evidence from the most diverse sources.

The more difficult questions remain for discussion: when was the cultivation of rye introduced into England? what determined its geographical distribution over the country? and why did the English swing over so completely from rye to wheat during the eighteenth century, although some other European peoples have remained rye-eaters until the twentieth century? To these questions Ashley could return only conjectural answers for lack of evidence; but his conjectures are of great interest and importance. He imagined the cultivation of wheat and rye spreading westwards across Europe from the Near East in two great movements—" the southern one, that of wheat, making its way round the southern shores of the Mediterranean and then around what are now Spain and France; and the more northern movement (that of rye) considerably later, proceeding along the central plain of Eastern and Middle Europe." Building on this hypothesis, Ashley hazarded the conclusion that the large-scale cultivation of wheat was introduced into Britain by the Romans, and that rye came in with the English invaders several centuries later.

The geographical distribution of rye in England during early modern times seems to have depended mainly on soil conditions. Rye could be grown on light sandy soils which were useless for the cultivation of wheat in the agrarian circumstances of the period. In two striking maps Sir William Ashley shows that the main rye-growing areas of the country (according to the corn

certificates of the sixteenth and earlier seventeenth centuries) corresponded almost exactly with the areas of sandy soil mentioned in the reports submitted to the old Board of Agriculture round about the beginning of the nineteenth century. What, then, determined the transition from rye to wheat in England, as distinct from the other countries of Northern Europe? The transition followed the distinctive development of agrarian organisation in England. Wheat was always better liked than rye by most people, and would be grown in preference to rye wherever possible. On the sandy soils of eastern England wheat could not be grown without considerable expenditure on marling or some equivalent method of enriching the soil. There was not much possibility of this expensive improvement of the soil being undertaken, except on the demesnes, so long as the old open-field system persisted and the small copyholders and "sturdy yeomen" survived. But with the appearance of the improving landlords and substantial tenant farmers of the eighteenth century, marling and liming became more general, and rye was rapidly displaced by wheat; whereas "a country like Germany . . . continues to be in the main a rye-growing and rye-eating land because it continues to be a country of peasant proprietors."

Elaborated with the skill of a master craftsman, a simple question concerning the bread-corn of our ancestors is thus shown to be "intimately bound up with some of the most fundamental problems of our economic and social history." Sir William Ashley's book is not only a fitting memorial to his scholarship; it is also a notable bequest to his countrymen.

A. REDFORD

[*Errors and doubtful points*:—(1) p. vii, l. 25: "Faster Transition from Wheat to Rye": transpose "wheat" and "rye." (2) p. 2, ll. 2–5: Miss Dorothy Marshall and the Webbs have recently shown that the allowance system in the administration of poor relief was in use at least a century before the "Speenhamland" decision of 1795. (3) p. 3, l. 2: for "barley" read "rye"? Sense not clear. (4) p. 9, bottom: change from words to figures in prices should be corrected. (5) p. 95, middle: "Bread of cocket or clere matin" requires some explanation. (6) pp. 97 and 103: Note 11 seems incomplete and obscure. (7) p. 119, note "s": Eden's *History of the Poor*: for *History* read *State*. (8) p. 153, ll. 1–4: reference made to papers by Mr. Salter and Mr. and Mrs. Webb might be more explicit. (9) p. 159, middle: for "the Near Levant" read either "the Levant" or "the Near East."]

Economic History of Europe to the End of the Middle Ages. By M. M. KNIGHT. (Allen and Unwin. Pp. xi + 260. 12*s*.)

DR. KNIGHT is a strong believer in the continuity of economic history; and the thread of continuity, round which his historical pattern is woven, is to be found in the development of commerce. Scholars of an older generation were accustomed to trace the evolution of economic organisation from the hunting stage to the pastoral stage, from pastoralism to settled agriculture, from an agricultural to an industrial phase, and so to the later glories of modern industrialism and a world-wide commerce. Dr. Knight leaves all such " economic stages " to the sociologist. For himself, he is concerned with economic history not in its sociological but in its " business " aspect; and commerce, as he makes abundantly clear, was the mainspring of business life in ancient and mediæval times, whatever may be the position nowadays. Giry's generalisation, " Commerce dominated industry in the Middle Ages," recurs again and again in Dr. Knight's pages, and may almost be regarded as his central theme.

Conveniently enough, the book begins with an account of economic life in the ancient Near East round about the year 2000 B.C. From that point the author's main task is to trace the westward expansion of commerce and civilisation, from what he calls the " triangle " of early civilisation (Egypt, Babylon, the Ægean) to Phœnicia and Greece, from Greece to Italy, from Italy to the Atlantic seaboard. He gives an illuminating bird's-eye view of the progress of Western civilisation (p. 87) :—" The great days of the Phœnicians and Greeks had come during a sort of twilight of empire, after the decline of old Egypt and Babylon, and before the newer type of great state, which led from Persia through the Hellenistic period following Alexander and culminated in Rome, had found its stride. Likewise, after that imposing fabric of empire had been withdrawn from the heart of Europe to its native Near East, a new heyday of the *commercial city-state* arrived. This time the chain of trading towns (with such manufacturing industry as their commerce positively dictated) spread from the Mediterranean over the passes and along the waterways into the very corners of Northern Europe." From the economic point of view the real distinction in mediæval Europe (p. 90) was not between such shadowy units as France and Germany (and England ?) but " between Northern and Southern Europe—the one near and the other far from Constantinople and the Saracens " (the centres of civilisation and science).

It follows that England, far from being made the centre of mediæval economic history, should be treated as a relatively backward region on the outermost fringe of civilisation. Indeed, the author's preface suggests that his original stimulus to the compilation of the book came from his conviction that England has occupied too prominent a place in American text-books of mediæval economic history. There can be no doubt that Dr. Knight is substantially just in this estimate of the comparative unimportance of mediæval England, and in his conviction that "the life of the British Isles is far from a full sample, or even a particularly representative one," of the history of European development. Not that he neglects English economic history; on the contrary, his treatment of English development is no less adequate than his account of the Italian city-states, which are the central feature of mediæval history to him. In the same way, while commerce (with industry as her handmaid) is the central theme of the book, yet agriculture receives no less substantial treatment; some readers may even consider Chapter V (on "The Manor") to be the most thoughtful and learned part of the book, in spite of the many disputable statements which it contains.

It goes without saying that there are likely to be a great many disputable statements, and even flagrant errors, in a book which covers the history of nearly 4000 years of Western civilisation in 250 pages. Some of the difficulties may arise either from differences of language or from the reviewer's ignorance. What, for instance, is "emmer," which is described (p. 12) as growing wild along with wheat in the Near East? Is it what English people would call "spelt"? And were there really "reindeer" in ancient Egypt (p. 21)? And is "corvée" properly described (p. 50) as "a Greek term for an Oriental institution"? Other difficulties arise from an occasional looseness of statement which may amount to actual obscurity of meaning. Thus the population of France is said to have "practically quadrupled" between the ninth and the sixteenth centuries, and this is described as a "four hundred per cent. increase" (p. 184). A similar obscurity attaches to the frequent references to ancient and mediæval coins in terms of modern currencies: as when the ancient Athenian drachma is described (p. 32) as "roughly equivalent to the modern franc, lira, krone or drachma." Sometimes Dr. Knight's knowledge of European topography seems inadequate, as in his statements about open-field tillage on p. 181: "Open-field tillage only partially decayed before the nineteenth

century. Half the English county of Cumberland was still unenclosed in 1794. Open-field methods were very common in northern France up to the Revolution." Here it may be presumed that Dr. Knight would not have used Cumberland as his example if he had realised what a large portion of that county consists of mountains and lakes.

In general, Dr. Knight's tendency is to view mediæval life in a more favourable light than would most economic historians. For the times and conditions of the Middle Ages he considers (p. 179) that "the open-field manor was about as efficient an agricultural unit as could have been found." He denies the restrictive effect of gild regulations in general terms (pp. 224–5):—"In spite of exceptions, it is safe to say that when the mediæval economic system was at its height, entrance into the various craft gilds was restricted by little except the merits of the candidates. . . . There was no class distinction between master and journeyman at the height of the Middle Ages." Such statements may not be actually incorrect, but they are likely to be very misleading. A minor defect of the book consists in the inadequacy of the index and the illustrations. The maps are few and poor; incidentally it may be noted that Hamburg has changed places with Lübeck in the map on p. 203.

Professor Allyn A. Young, in his editorial introduction to the book, makes a proud claim on its behalf:—"Better than any other book in the English language" (he writes) "it answers the particular questions about ancient and mediæval history that are most important for the student of the economic problems of the present day. . . . For the student of economics the present volume is the best introduction he can find anywhere to the problems of economic history." This is perhaps a little too good to be true, and may cause the book to be approached in a hypercritical spirit; but Dr. Knight's book is certainly, in spite of its defects, a scrupulous and conscientious piece of work which may be recommended both to the academic student and to the general reader.

A. Redford

General Economic History. By Max Weber. (Translated by Frank H. Knight, Ph.D.) (London: George Allen and Unwin. 1927. Pp. xviii + 401. 12*s.*)

Max Weber (1864–1922) belongs to the German school of historical sociologists and ranks with Werner Sombart as a leading exponent of the historical development of social life.

Originally, Weber studied law at Heidelberg, Strassburg, Berlin and Göttingen, and afterwards lectured on Roman and German law. In 1894 he was appointed Professor of Political Economy at Freiburg, whence, three years later, he transferred to Heidelberg.

Always Weber was at pains to keep uppermost the sociological aspects of his studies and not to become primarily an historian. Hence his initial reluctance to undertake a course of lectures upon economic history. His consent once given, however, he did his task exceedingly well, and the lectures delivered in the winter of 1919-20, under the title "Outlines of Universal Social and Economic History," have since been cast into book form. The plan is—Primitive Agricultural Organisation and Property Systems; The Pre-capitalistic Age: (*a*) Industry and Mining, (*b*) Commerce and Exchange; The Origin of Modern Capitalism. This is an enormous sweep; and Dr. Knight, the able translator, anticipates a possible criticism when he urges that "notably in the sections dealing with mediæval institutions," historical exactness is impossible within the limits of the work, and less important than broad interpretative insight.

A comparative treatment of economic life and institutions in Oriental, as well as Occidental, countries is attempted. Developments in Germany, England, France and Italy are set closely beside those in India and China so that the significance of similarities and contrasts can scarcely be missed. Moreover, one's interest is intensified by the fact that Weber's interpretations are those of a scholar whose knowledge was universal in scope; an eminent specialist, not in economic history, but in a closely connected field of study.

The first chapter contains an explanation of the influence of the peculiarities of the ancient German plough upon the shape of the strips of land; and of the ploughing capacity of an ox upon their size. The predominance of the three-field system is traced at least as far back as the eighth century A.D., but, like the *Markgenossenschaft*, its beginnings are lost in obscurity. There was, of course, nothing approaching uniformity in the German countries, much less in Europe as a whole. On all sides German rural organisation came into contact with other forms, Alpine husbandry, the Slav system and the remains of the Roman method of land distribution. Mixed systems resulted in many instances. Having surveyed Oriental systems, Weber concludes, against De Laveleye's thesis, that husbandry was not originally communal. "In reality, nothing definite can be said in general terms about the economic life of primitive man." Primitive

forms of property appropriation were equally diverse, being determined not by economic influences alone, but by religious, magical and military motives also. One source of seigniorial claims was military leadership: another was the profession of magic. "In many cases the chieftain developed, not out of a military leader, but out of a rain-maker," and an alliance of prince with priest could hardly fail to bring profit, especially when coupled with a monopoly of trade.

In Chapter VI, on the capitalistic development of the Manor, the plantation systems in the Ancient World and the New World are compared. The broad similarities are striking. Romans and Americans alike found that "slavery is profitable only when handled with the most rigid discipline associated with ruthless exploitation," and both encountered the tantalising difficulty of sustaining the supply of slaves. The Romans, pursuing their general policy of stimulating marriage and the birth of children, promised freedom to the slave-mother after the third birth. But, says Weber, in vain, because no life except prostitution awaited the freed woman. The Americans also tried to breed slaves, and it was possible to distinguish negro-breeding States from negro-consuming States. All this Weber makes clear, but he seems to go too far when he states rather categorically that the slave economy would have been transformed into a share tenant system without the War of Secession, and that the mismanagement of the victorious Northerners resulted in a universal exclusion of negroes from the suffrage and the establishment of a strong caste distinction between blacks and whites.

Of the guilds Weber writes mainly in terms of struggle. In their endeavours to secure for their members "a substantial burgherly prosperity" the guilds engaged in strenuous contests with consumers, municipal authorities, merchants, monasteries, rural craftsmen, urban journeymen and rival guilds. The bases of Weber's criticism of the so-called manorial law theory of guild development held by Schmoller and others, and the comparative nature of the treatment, make Chapters IX–XI worth careful attention.

The stages in the approach of capitalism are marked in various parts of the two hemispheres. In Eastern countries the rise of the domestic system was delayed by forces non-existent in Europe. In the East generally, the bazaar system, with craftsmen working not at home but, so to speak, beside the market, presented an obstacle: in China the obstruction was clan industry: in India, the caste system: in both countries, "magical traditionalism" and the presence of unfree workers. The dominance of magic

outside Christianity's sphere of influence is assessed by Weber as "one of the most serious obstructions to the rationalisation of economic life," because of its tendency to stereotype technology and economic relations.

The treatment of commerce and exchange in the pre-capitalistic period seems to be somewhat slighter than other parts of the book. Chapter XVIII disappointingly devotes barely six pages to mercantile guilds in Europe and the East. The inevitable emergence of exact accounting methods at the advent of capitalism is a topic seldom touched by other writers. Weber frequently refers to it. Early book-keeping is discussed (Chapter XVII), but there is only the merest mention of Italian double-entry, and I was surprised at the absence of a reference to Fra Lucas Pacioli's treatise on this subject, published in Venice in 1494. Weber's statement that "the device of the balance was first insisted upon by the Dutch theorist Simon Steven in the year 1698" is clearly incorrect, for Pacioli devotes three chapters to balancing the books, which, he says, "is extremely necessary to the good merchant; otherwise . . . you will have to feel your way forward like a blind person, and much loss can arise therefrom; therefore with deep study and care make efforts above all to be a good accountant."

The final chapter contains a summary of Weber's famous discussion of religion in relation to economic ethics and the coming of capitalism. All his work on the sociology of religions (among which the celebrated essay on *Die Protestantische Ethik und der Geist des Kapitalismus* stands out) is, by common consent, excellent, but, as Mr. Tawney has shown in *Religion and the Rise of Capitalism* (pp. 319–21), it is not completely beyond criticism.

The expression of a natural wish that Weber had actually written this book with his own hand must not be construed as ingratitude to the editors and students who, with commendable enterprise, took pains to pass on so much important and scholarly work to those who had not the privilege of hearing the lectures.

ALFRED PLUMMER

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SAMUEL FLAGG BEMIS, Ph.D.: (1) *Jay's Treaty: a study in Commerce and Diplomacy.* (The Macmillan Co., New York, 1923. Pp. xiv + 388.) (2) *Pinckney's Treaty: a study of America's advantage from Europe's distress,* 1783–1800. (The Johns Hopkins Press, Baltimore, 1926. Pp. xii + 421.)

THE author presents the first of these two studies as Professor of History, Whitman College, the second as Professor of History,

George Washington University. The first won a prize of $3000 from the Knights of Columbus; the second constituted the Albert Shaw Lectures in Diplomatic History, 1926. Amply documented and well-indexed, they clearly take rank with Webster's *Castlereagh* and Temperley's *Canning*. The economics, indeed, are incidental to the diplomacy, but a careful perusal yields indispensable economic knowledge concerning that war-torn age, the late eighteenth century. The two books cover roughly the same period, 1783 to 1800; John Jay and the Nootka Sound controversy of 1790 appear in both. We deal with the later published book first, because its roots go further back.

Pinckney's Treaty is the name of the Treaty which was signed in Spain between Spain and the U.S.A. on October 27, 1795. Thomas Pinckney of South Carolina, the American Minister in London since 1791, negotiated it with Godoy, the chief Minister of Spain. It was the rich fruit of effort begun in 1779, when Spain joined France in support of America against England. By it America gained all she then sought, as well as the reversion to everything concealed in the future: a boundary line as far south as the Floridas, which Spain had conquered from England during the American War; an acceptance of the principles of the armed neutrality (free ships make free goods, etc.); and, above all, the free navigation of the Mississippi to the sea, together with depot rights at New Orleans which made the freedom of navigation commercially effective. America gained so much for two reasons. First, she was on the spot, and the young American Government was forced by her own settlers, "the men of the Western waters," already astride the Mississippi, to claim what they were occupying. Secondly, Spain was immersed in the revolutionary upheaval in Europe, and she hoped vaguely to save South America by yielding in the north. She was now the enemy and now the ally of England, in both cases to her colonial ruin. America, by "Patience and Persuasion," used the troubles of Europe to lay the foundations of her continental expansion at the expense of Spain and France. For Spain in 1800 ceded Louisiana to France—that same great Louisiana which Louis XV had ceded to his cousin of Spain in 1762, and in 1803 America purchased it from France, just as, a little later, she purchased the Floridas from Spain. One is impressed by the inevitableness of it all; and the author seems to us unsound in his occasional purple patches (or is it that the Knights of Columbus demanded value for their money?). Thus

he writes, if Great Britain had retained the Floridas in 1783, "it is likely . . . that American territory would never have crossed the Mississippi" (p. 47). Again, America, to assure her right of depot, negotiated the purchase of New Orleans. But for this she might not have gone on to buy Louisiana: "What then would have been the destiny of that great region? A second Canada?" (p. 353). Most assuredly not. The men of the Western waters would have decided that, with no French Quebec and no United Empire Loyalists to say them nay.

Throughout the author exhibits the richness of the documents in the American and Spanish archives. English economists will note the account of the trading activities of William Panton & Co. of England with the North American Indians in Spanish territory (pp. 66–8); and there is a concise appendix dealing with the loans and subsidies made by Spain to the U.S.A. during the War of Independence. America repaid the loans in full by August 1793. There are also interesting references to the trade relations between Spain and America; and Spain's jealous guard over her colonial monopoly, as evidenced here, may be profitably supplemented by the account in Webster's *Castlereagh* of England's entry into South American markets, when the colonies of Spain revolted. But America in 1795 was more concerned with an outlet to the sea and thus to Europe. Freedom to trade with Europe, without entanglement in European alliances, was the guiding principle of Washington and Monroe, and indubitably sound. But in an age of war the country of Adam Smith and Nelson stood in the way of this freedom.

Jay's Treaty was concluded in London on November 14, 1794, between John Jay, Chief Justice of the U.S.A., and William Wyndham, Baron Grenville, Pitt's Secretary of State for Foreign Affairs. Ratifications were exchanged on October 28, 1795. America was confirmed in her land frontier to the north (of the possibilities of Canada British statesmen had then no gleam), and in return for British evacuation of the frontier posts (Art. VI.) she accepted a Commission for the indemnification of British creditors who had suffered trade losses during the War of Independence. The issue had been in dispute since 1783, but Jay's Treaty supplied the machinery for the settlement eventually reached under the Convention of 1802. Great Britain finally paid America \$3 millions, because the debts due to England (\$2·8 m.) were less by that amount than the compensation awarded in London to America on account of naval seizures. The details of the settlement are given in Appendices IV and V.

The text of the Treaty is given in Appendix VI. The trade provisions, and those relating to international law at sea, which upheld the British standpoint in its entirety, were to last only twelve years. Article XII., covering the West India trade, was so unsatisfactory that it was rejected by the American Senate (Great Britain accepting the treaty as thus amended); and this is not surprising, seeing that, in return for the poor privilege of engaging in the direct trade to West India with ships of not more than seventy tons burthen, America agreed not to carry sugar, coffee, cocoa, *or cotton*, either from the islands *or from her own mainland*, to any part of the world. So keen was the American Government for a treaty of some sort, so little was the Cotton Kingdom foreseen in 1794. Professor Bemis ends his book: "More aptly the treaty might be called Hamilton's treaty." Now Alexander Hamilton's policy was dictated not only by his personal friendship with Great Britain (which seems to be a sore point with the author), but also by his conviction that continued peace with England and a commercial treaty, as an aid thereto, were essential to the new Union. "The power of the Federal Government to hold the Union together under the Constitution depended on the financial system which Hamilton had created. The elixir of national credit which energised the Government depended . . . almost wholly on imports, which a war or even commercial hostility with Great Britain would have destroyed" (p. 270). Chapter II, "Anglo-American Commerce"—an excellent chapter—proves this to the hilt. It shows how and why the mercantilism of Lord Sheffield prevailed over Pitt, the disciple of Adam Smith. In 1790 90 per cent. of America's duty-paying imports came from Great Britain. That was decisive for Hamilton, who had to raise a federal revenue. The trade was also very important to Great Britain, being altogether an export of manufactures. The British Customs Records of this period have been destroyed by fire, but Prof. Bemis has most cleverly filled the gap by searching Pitt's papers and finding there a copy of the Customs Returns for 1788–1794. These show that the U.S.A. took one-twelfth of the exported manufactures of Great Britain in 1788 and in 1793–1794 nearly one-fifth. In 1794, out of £16 millions, the United States took $3\frac{1}{2}$, the British West Indies $3\frac{1}{4}$ and Germany $1\frac{1}{2}$.

These two books add considerably to our knowledge of British trade policy in North America after 1783; they illustrate at every turn the interdependence of economics and politics; they enable the English reader to understand how much British

industry was indebted to the British navy. One can see too that from America's point of view British action was high-handed, and that the war of 1812 was wrong only in that it was so long postponed.

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The Cape Colour Question. By W. M. MACMILLAN. (London: Faber and Gwyer. 21*s.* net.)

A History of South Africa. By ERIC A. WALKER. (London: Longmans & Co. 12*s.* 6*d.* net.)

IN the controversy over the Colour Bar Bill in South Africa two years ago, the opponents of that measure were nicknamed "The New Philip Party." One of them, Professor Macmillan of Johannesburg, was at that time at work on the private papers of the Philip to whom reference was made; he has now worked the material obtained from them into a study, partly historical and partly analytical, of the relations of the white and coloured inhabitants of the old Cape Colony, in which Philip got the reputation he still bears. Its publication should deter the advocates of Colour Bars from using Philip's name as a term of abuse; certainly the native's friends will not disdain the appellation.

John Philip was an Independent minister, the self-educated son of an Aberdeen weaver, who was sent out by the London Missionary Society to supervise its African stations in 1819. A man of great force of character, he took an active part in the controversies of the colony, frequently in opposition to the Governor, and, once he had made himself the champion of the aboriginal inhabitants, usually in opposition to the farmers. In addition to the very considerable influence that he exercised directly, as Professor Macmillan is able to show, by personal advice and pressure, he secured the ear of the politically influential Anti-Slavery group in England, and was so able to influence the British Parliament over the heads of the local Government. Thus he came to be regarded as the type of political missionary, upholding purely sentimental claims of natives against the urgent needs of the white colonists who were building up the country, and invoking the interference from outside of distant Governments even more ignorant than himself. The same description is applied by planters in Kenya and Rhodesia to-day to missionaries who are trying to secure for the Bantu the same consideration and legal protection as Philip secured for the Hottentot.

South African historians have accepted this popular view;

Professor Macmillan's use of Philip's letters and diaries makes it possible to check it. The result is to confirm the traditional view of Philip's position in the long controversy over native rights, but to destroy the legend of his personality. He is shown to possess wisdom as well as force, as exercising consideration for the colonists as well as for the natives, as an opponent of autocracy and a pioneer of constitutional government as well as the advocate of equality before the law irrespective of colour; above all, as the first great advocate of the policy of "possessory segregation" (the reservation of areas, from which white land-owners are excluded, as a nursery for native life and a safeguard of native morale), on which General Hertzog's Native Lands Bill is supposed to be founded. The numerous quotations that Professor Macmillan gives well show the quality of the man and the penetration of his judgment; for example, the references to the difficulty of missionary work and the limitations of missionaries on p. 236, the memorandum on the Settler problem on pp. 113-14, or any of his references to the farmer's fondness for vagrancy laws (*e.g.* pp. 223–4).

The Cape Colour Question is not, however, a biography or a narrative. At times it makes the reader appreciate the merits of the old-fashioned "date and fact" history, in which topics are dealt with in their chronological order, and the historian's comments clearly separated from his statements of fact. Professor Macmillan is much more interested in the colour problem of the twentieth century than he is in that of the early nineteenth century. He has done perhaps more than any other person in South Africa to reveal the actual conditions of poverty, among whites as well as natives, in that country, and his history is a further contribution to the study of that problem. "It is still commonly forgotten that low-grade labour makes low-grade employers," he remarks on p. 252; "and in a country where, at best, economical and social conditions make the masters themselves but poor and unprogressive, the constant disregard for the interests and improvement of the labourers has reacted disastrously on the whites themselves." Philip was endeavouring to preach the same lesson a century ago. An extraordinary similarity, to both the problems and the outlook of Africa to-day, is revealed. Then, as now, farmers complained of shortage of labour, and accused the natives of idleness, because they did not flock to work at inadequate wages under servile conditions. Then, as now, the native's need of land could not be satisfied, because the farmers' land-hunger was insatiable, and because land

of his own made him less inclined to work for wages. Then, as now, the farmers sought the Government's aid to coerce the unwilling native. "The attitude shown by the colonists . . . is instructive. One leading characteristic was a profound belief in the efficacy, and indeed in the necessity, of restrictions on people of colour. 'Passes,' given or withheld by the 'master,' to limit and control their freedom of movement, were perhaps the key-stone of the arch of the system. Measures for the betterment of the coloured races must always be kept in strict subordination to the supreme necessity for making their labour as cheap and plentiful as possible for work on the farms. There must also be provisions against 'vagrancy,' and 'vagabondage,' and 'apprentice' laws for the better 'control' of the children." Philip summarised the attitude of his opponents in a sentence: "an excess of civilisation may spoil the Hottentots for the service of the Boers." Elsewhere he summarised his policy for the Hottentots; it is in a note of a conversation with Huskisson, which throws light on both men: "'Tell me in a sentence what you want for the Hottentots?' My reply was: 'I require nothing for the Hottentots but the power of bringing their labour to a fair market.' 'That,' he immediately added, 'is all you require. It includes everything else.'" The settler's attitude and the native's need are not very different in Africa to-day, wherever the settler controls the Government.

In the Cape Colony, however, the farmers did not get their way with the natives; that was the chief cause of the trek. Philip's influence with the British Government, through his Evangelical allies, was great. In succession the English Government imposed upon the colony a series of laws for the protection of slaves, the abolition of slavery, and an Ordinance that safeguarded the coloured people from falling into the condition of serfs. Philip and his friends could not secure land for their protégés; but they did succeed in establishing their equality before the law, *before* full self-government was granted. The Cape Constitution contained no mention of Colour and no vestige of a Colour Bar. The importance of this precedent is the lesson Professor Macmillan wishes to bring home. "The Bantu are held to be a finer stock than the old Hottentots. Proportionately they outnumber the Europeans by little more than did Hottentots and other coloured races the Cape Colonists of a century ago. But by a slow and devious process the old Cape Colony raised even its despised Hottentots to become useful citizens, and, in the eyes of Union law, members of civilised society."

For the setting in which Philip's career fell, we can turn to Professor Walker's *History*. No summary can be attempted in this case; for Professor Walker has compressed into a single volume, with complete lucidity and a god-like impartiality, the history of the whole country south of the Zambesi from the first Portuguese discoveries to the termination of the British South Africa Company's charter in 1924. Moreover, the facts are marshalled and discussed with so much skill and wit that the reader has no feeling that the matter is compressed or the narrative overcrowded. South Africa has a special interest for economists; its history is told here in adequate detail and without political or economic bias. There is an association with Professor Macmillan's book, because Professor Walker finds the chief interest and theme of South African history, not in the relations of Briton and Boer, but of European and native; a position which the economist also is bound to take. He carries further back into the eighteenth century the characteristic problem and attitudes that Professor Macmillan found a century ago. Probably in no country are the problems of to-day so unintelligible by any light except that of history.

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Les Origines de la Révolution Russe. By JEAN LESCURE, Professeur à la Faculté de Droit à Paris. (Paris: Recueil Sirey. 1927. Pp. viii + 230.)

PROFESSOR LESCURE'S book is devoted to an analysis of the social structure of Russia before the war. In his first chapter Professor Lescure speaks of the legal position of the upper classes (nobility and clergy), the middle classes (bourgeoisie and *intelligentsia*), and of peasants and workmen in the eighteenth and nineteenth centuries. The *Leitmotiv* of this chapter, as well as of the preface, is that the social structure of Russia was in no way similar to that of France in 1789, although both were agricultural countries. Professor Lescure's emphasis of this dissimilarity is particularly important in view of the tendency, both in this country and abroad, to explain the Russian revolution by comparing the events of 1789 with the collapse of the Russian Empire in 1917; such a comparison requires, however, great caution and delicacy of touch.

"Russia," says Professor Lescure, "like the France of the eighteenth century, is mainly an agricultural country, inhabited

by poor peasants; but the tenure of land is organised on different lines: the *Mir* invests it with a quite special character. The Russian peasant is still a serf in the middle of the nineteenth century. Social structure differs from that of France in so far as the position of the clergy is concerned. The Russian clergy is, on the whole, still undistinguishable from the people. The nobility has no authority; its powers are derived from the Tsar and are revocable. There is a nobility, but parentage plays a much smaller part in its creation than in the France of the eighteenth century. . . ." Professor Lescure distinguishes between nobility and aristocracy; "'there is a kind of nobility,'" he says, quoting Leroy-Beaulieu, "'but there is no aristocracy.'" "The King of France is *primus inter pares*; in Russia he is *primus* '*tout court*.' The clergyman is as poor as the peasants among whom he lives, and the clergy as a body does not carry sufficient authority to give effective support to a monarchy based upon an acceptance of the doctrine of the Divine Right of Kings." [1]

The peasantry is the chief object of Professor Lescure's study, and his description of the *intelligentsia* and the working classes is fragmentary and incomplete. This is a serious gap in his narrative of the social history of Russia, in which the *intelligentsia* since the Decabrist movement, and even before, has played a great and important part.

Chapters II and III deal with the land question in Russia and the common law of the peasantry. Based on such authorities as Tschuproff, Kulisher, Kaufmann and Maksim Kovalevsky,[2] these chapters are not only interesting, but ought to be recommended to all who study the Russian land question and Russian peasant life. In the last two chapters Professor Lescure describes the reforms of Alexander II and of Stolypine; the first of these chapters gives us a clear understanding of the liberation of serfs, while the second shows Stolypine's great talent for killing the remnants of the *Mir* and *obschina* (common ownership of the land and peasant self-government) and creating the smallholding system in Russia. Stolypine's plans for emigration to Siberia and his ideas, in general, are, in our opinion, over-estimated, while the liberation movements of the *narodniki* and *zapadniki*, the revolution of 1905, the development of trade and industry, the growth of a labour movement organised on Western lines, are under-estimated, especially in relation to the general background

[1] Pp. 1, 2, 3, 22, 24.

[2] M. Kovalevsky's name is misspelt throughout the book, and it is hoped that this will be corrected in subsequent editions.

of Russian life before and after the war, and as ferments and factors of the revolution of 1917.

Professor Lescure's conclusions and his whole estimate of the Russian revolution are interesting and original, and contain a great deal of truth which is bound to be unpalatable to the advocates of the new ideas and methods which were proclaimed to the world by the prophets of a millennium born of force and autocracy. "The Russian revolution," says Professor Lescure, "is much more an illustration of the *Principles of Population* of Malthus than of the *Capital* of Marx." The origin of the Russian revolution, according to Professor Lescure, is the agrarian problem. "The proletarian revolution in Russia was preceded by the agrarian revolution, and the Russian revolution is therefore a peasants' revolution, although its lead was taken by the intellectual Marxists. . . . This revolution does not authorise Europe to rejoice in the success of Marxism." Professor Lescure's view of Russia's immediate future and the task confronting her is that "to-morrow, or the day after, Russia must intensify agriculture, organise emigration, develop trade and industry . . . and all this is impossible without capital." [1]

S. P. TURIN

De Omloopssnelheid van het Geld. By DR. M. W. HOLTROP. (Amsterdam: H. J. Paris. 1928. Pp. 215.)

DR. HOLTROP'S treatise on the rapidity of circulation of money is an example of a type of work which, it is to be feared, we are constitutionally incapable of producing in this country. Bibliographies are deceitful things, and may merely testify to the author's diligence in studying other bibliographies, but no added list of authorities—overwhelming as it is in the present case—is required to bear witness to Dr. Holtrop's amazing diligence, patience and perseverance. The earlier part of the work is devoted to tracing historically the growth of doctrine with regard to the rapidity of circulation of money; the second part is a painstaking analysis of monetary and currency problems with a view to the exposition of the author's own views. Probably the first part, with its careful marshalling of different lines of thought, will be found the more interesting. Petty, in various passages, is regarded as the first to have approached the idea of rapidity of circulation. Locke is precise in stating the problem, and almost uses the modern phrase when, in discussing how much money

[1] Pp. iii, vii, 224.

may be required to support trade, he says that this proportion " is hard to determine, because it depends not merely on the quantity of money, but on the quickness of its circulation. The very same shilling may, at one time, pay twenty men in twenty days; at another, rest in the same hands one hundred days together." For the development of ideas on the subject, the most important of the early writers was Cantillon, who advanced so far as to declare that " une accélération, ou une plus grande vitesse, dans la circulation de l'argent du troc, vaut autant qu'une augmentation d'argent effectif, jusqu'à un certain degré," thus making increased rapidity of circulation equivalent to an increase in the amount of money. Passing over a number of minor writers whose views are carefully tabulated, Dr. Holtrop next lays emphasis on the services of Thornton in clarifying theory on this subject, and finds in him what he calls the " first clear formulation of the modern quantity theory " in these words : " It is on the degree of rapidity of circulation of each, combined with the consideration of quantity, and not on the quantity alone, that the value of the circulating medium of any country depends." Thornton in his discussion had considered the effect of " seasons of alarm." In the subsequent development two main lines of thought are distinguished, represented by the difference between Thornton and the elder Mill, whose definition was that " by rapidity of circulation is meant the number of times the money must change hands to effect one sale of all the commodities." On the one view rapidity of circulation may be defined as the average number of times that the pieces of money change hands in a given time; on the other view it is the average number of times money must change hands in order to exchange a certain quantity of goods. The descendants of these two lines of thought, as also certain non-monetary theories (a-monétaire theorieën) as represented by Marx, are discussed, developed and classified, and full justice is done to the " school van Cambridge."

Thereafter Dr. Holtrop develops what is in effect a treatise on money. Interesting is his discussion of the applicability of the theory of marginal value to the case of money, and his conclusion is that " the marginal utility of money—in so far as the expression may be used—can never be anything else than the marginal utility of the goods which can be obtained for the money " (p. 92), and that consequently " the theory of marginal value is not applicable to money, and for the reason that there does not exist a valuation of the money alongside of and in addition to the valuation of the goods " (p. 95). Very careful also is his analysis

of the causes that lead to variations in the need for money, but into these and other points it is not possible to enter here. In perusing this very learned and most careful work, one is divided between admiration for the Dutch people whose attainments presumably justify a Dutch publisher in presenting to them such a book for their instruction, and regret that it has not appeared in a language which would have opened for it a larger audience.

ALEXANDER GRAY

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Grundriss der Sozialökonomik. IX. Abteilung. Zweite Teil. (Tübingen: Mohr. 1927. Pp. vi + 526. 25 Marks.)

THE ninth section of the *Grundriss der Sozialökonomik* deals with "The social system of Capitalism." It is divided into two parts. The title of the first part (published in 1926) is "Social Stratification in the Period of Capitalism." It treats of subjects such as "The aristocracy in the period of Capitalism," "The industrial proletariat," "The psychology of anti-capitalistic mass movements."

The second part describes the gradual emergence from the individualism of the early nineteenth century; the substitution of a positive for a negative police conception of State activity within the organisation of industrial life. It surveys the attempts made by public authorities and voluntary associations to exercise conscious control over industrial conditions and industrial relations. It traces the growth of a new industrial order.

There are certain classes in the community, who, socially valuable, but weak economically, find it hard to maintain themselves unaided in the competitive struggle. Should the State intervene to preserve them? To what extent is State intervention likely to prove effective? Karl Schmidt reviews the various legislative measures deemed desirable in Germany in order to keep the peasantry on the land and prevent their holdings falling into the hands of large proprietors or becoming the prey of commercial speculation (*Bauernschutzpolitik*). One group of these measures is considered in detail by Otto Swart. He examines the policy of "home colonisation" (*Innere Kolonisation*). But the peasantry do not stand alone. The small craftsman and the small shopkeeper clamour for State aid in their struggle against the inexorable advance of Capitalism. Theodor Brauer explores the problem of "the small man"; the social grounds for

preserving a strong body of "independent" citizens; the desirability and the possibility of State intervention (*Mittelstands-politik*). The treatment of the subject is peculiarly German. The essay describes at length the economic policy of the mediæval town, emphasising the connection between the mediæval crafts-men and the members of the modern middle class.

The various agencies (whether deriving their funds from voluntary or compulsory sources) which seek to make provision for the poor are enumerated and appraised in a learned essay of Adolph Weber's, containing an abundance of historical and comparative information. He considers, too, the obstacles hampering the efficient organisation and co-ordination of public assistance and private charity (*Caritätspolitik*).

Robert Wilbrandt asks why "the consumers who, according to the Liberal teaching, were the peculiar favourites of Capitalism have come to play so strange a part. Busy like moles, it is they, not the industrial proletariat, who are the grave-diggers of Capitalism." Yet, vainly seeking for solutions of the familiar difficulties which face the Co-operative movement, Professor Wilbrandt leaves us wondering "whether those who have failed to make good, as individuals in the competitive struggle will have to admit failure also when acting in co-operation" (*Konsum-vereinspolitik*).

W. Wygodzinski and V. Totomianz have written a comprehensive account of the growth of "Co-operation," the types of Co-operative Association and the adaptation of Co-operative principles to suit the particular requirements of different countries (*Genossenschaftswesen*).

The bulk of this second part is devoted to an examination of the various measures found necessary in the industrialised countries to regulate private enterprise and reconcile the conflict between considerations of private advantage and public welfare. The problem of social relationships in industry and the different forms of social legislation are handled in three lengthy, well-balanced and elaborate chapters. The treatment of the various subjects is historical, descriptive, concrete, though the selection and presentation of the data submitted would seem occasionally to be influenced by Marxian feeling. Professor Lederer and Dr. Marschak have had to work through a formidable accumulation of material. They are to be congratulated upon their joint contribution. Trade Unionism, Unemployment, Arbitration, Industrial Councils, Factory Legislation, Regulation of Wages and Social Insurance (this last handled by Professor Lederer

alone) are the main subjects of a most valuable comparative study which English readers should find peculiarly useful.

J. LEMBERGER

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Absatzmangel und Arbeitslosigkeit als Dauerzustand. By DR. OTTO CONRAD. (Vienna: Hölder-P.-T. 1927. Pp. 104. 3*m.*)

DR. OTTO CONRAD'S brochure is an attempt to explain on theoretical grounds the apparent permanence (*Dauerzustand*) of unemployment (*Arbeitslosigkeit*) and the lack of markets (*Absatzmangel*) in most European countries to-day.

The first section finds the immediate cause to be a raising of prices above that "natural price" where all the goods produced by the full employment of the means of production would find markets. This section was originally published in the *Oesterreichischen Volkswirt* (July–August, 1925) and initiated, apparently, a fierce controversy. Dr. Conrad maintains that prices standing above the natural price are due to the efforts of all classes of producers (the proletariat and the salariat no less than the entrepreneur) to raise their rates of pay. He takes as an illustration an increase in the wages of bakers unaccompanied by any increase in the demand for their services, and attacks Professor Philippovich's contention that such an increase, followed by a rise in the price of bread, merely substitutes additional purchasing power (*Kaufkraft*) on the part of the bakers in place of that of former consumers.

This view, as Dr. Conrad says, is widely held to-day, and he suggests that the low estimation in which theory is held among practical business men is not to be wondered at when problems of such importance are left without a clear and incontrovertible solution. But we are not certain that Dr. Conrad's treatment makes it any clearer. He uses a simplified diagram in which bakers, bread consumers, and "other" workers are denoted by letters, and the fact that a rise in the price of bread diverts income from "other" workers to bread workers is shown by dotted lines. This income transferred from one industry to another represents equal purchasing power, but the rise in the price of bread inflicts an uncompensated loss, in Dr. Conrad's view, upon the original bread consumers.

Here the diagrammatic representation leads one astray in distinguishing under separate letters K the consumers and B the

bakers. After all, B are part of K; bakers, presumably, are not so sick of the smell of bread that they do not eat some themselves, or at least allow their families to do so. And if and when they and their families are satiated with bread, they will buy more of the sort of things made by the "other" workers that the original consumers (K) bought. Dr. Conrad's dotted lines fail to indicate these complications. Nevertheless he presents forceful arguments in the over-simplified "other things being equal" manner, against the theory that a rise in wages is bound to create new markets irrespective of a rise in productivity.

The more important intermediate causes of economic paralysis which Dr. Conrad points to in his second section are the policy of isolation and tariff walls pursued by separate States, the disturbance of the "technical apparatus" and organisation of industry, and the decrease of efficiency of labour attributable particularly to the eight-hour day and the reduction of the intensity of work. Dr. Conrad has no difficulty in overwhelming the theory which he attributes even to Professor Philippovich, that a shortening of hours implies the employment of a proportionately greater number of persons, but he does not produce much statistical or other evidence that the eight-hour day has, in fact, reduced efficiency, or that the intensity of work is actually less than before the war in Austria or elsewhere.

In the last section of his booklet Dr. Conrad finds the ultimate cause of economic paralysis to be the disturbance of the community of interests (*Wirtschaftsgemeinschaft*) through the spread of socialism—and liberalism! Socialism and liberalism agree in putting personal interests above that of the community and the State. The only difference between them is that one advances the interests of the wage-earners, the other that of the employers. Against such a policy Dr. Conrad pits the words of Mr. Henry Ford, the work of Councillor Breitner in the Administration of Vienna, and the deeds, or at least the acts, of Benvenuto Mussolini. True, at the time Dr. Conrad was writing (October 1926) the number of unemployed in Italy was, according to the *London and Cambridge Economic Service*, only 89,000. At the present moment (March 1928) it is, according to the same source, 439,000. Can Dr. Conrad be certain that in spite of the Fascist régime of State control, this heavy and steadily increasing *Arbeitslosigkeit* is not a *Dauerzustand*?

P. SARGANT FLORENCE

Liberalismus und Protektionismus in der englischen Wirtschaftspolitik seit dem Kriege. By DR. CHARLOTTE LEUBUSCHER. (Jena: Gustav Fischer. Pp. 224. 10*m.*)

VISITING England in 1924 and again in 1925 on social studies bent, Dr. Leubuscher was impressed by the new currents of opinion which were flowing in economic and political circles, and realised that certain long established fiscal axioms and postulates were being subjected to searching scrutiny and criticism. What she saw and heard convinced her that the last of the old "Liberalistic" traditions were being seriously challenged, and that "Protectionism" had again raised its front, this time with the determination to settle accounts more summarily with "individualistic economy." Hence her resolve to make a systematic inquiry into what was happening in this country, and the publication of this careful and conscientious statement of the results.

It is probable that many English readers of Dr. Leubuscher's study will gain new and startling impressions of the revolution in economic and fiscal policy which dates from the outbreak of the war and has made steady progress ever since. Special attention is given in these pages to the protection given to "key," new and threatened industries by the erection of tariff barriers and the grant of State subsidies, the export credits scheme, the guarantees under the Trade Facilities Acts, assisted migration, trade mark legislation, the somewhat one-sided system of Imperial Preference, the policy of Empire development, and the fostering of Empire trade by investigation, scientific research and the grant of public money. In surveying all these questions the author has evidently gone to infinite pains, and her study of Parliamentary and other reports and papers, official and non-official, must have been a great trial of courage and patience.

In her conclusions and judgments, too, she shows a keen eye for essential facts, and an unerring perception of the possible dangers as well as the promise of the "new course" which England is following. To take an example, not a few critics of present-day reorientations in imperial matters, who readily recognise the necessity for facing new tasks with improved methods, and of applying to hitherto unsolved problems untried solutions, may see in the following reference to the implications of Imperial Preference the confirmation of their own apprehensions:—"Viewed economically the way of Imperial Preference implies for England, for an indefinite time, *a policy of giving.* The question how far England will go depends upon how

far she is prepared or compelled to make economic and financial sacrifices for the maintenance and strengthening of the Empire." The question here raised is one of immense moment. Obviously the "policy of giving" cannot be carried wisely beyond certain limits, and the danger point might be reached if the result were to impose any unreasonable burden upon the mother country, handicapped so heavily as it is already by the existing liabilities of Empire, the vast preponderance of which falls upon its shoulders. We have got to duties on many food-stuffs already; shall we go further, and is the road we have entered safe at all? The great fear is lest the effect of the "policy of giving" should be to weaken the attachment to the Empire of the mass of the working-class electorate, so provoking a revulsion of sentiment similar to that which occurred in the middle of last century. It would have been interesting if Dr. Leubuscher had extended to this important aspect of the question her survey of party attitudes to imperial policy. Altogether her book is a notable and meritorious piece of work.

W. H. DAWSON

Vom Wirtschaftskrieg zur Wirtschaftskonferenz. By DR. BERNHARD HARMS, Professor of Kiel University. (Jena: Gustav Fischer. Pp. 359. 15*m.*)

IN this volume Professor Harms has collected a number of lectures and addresses on different aspects of world-economy which were delivered by him between 1916 and 1927. The earliest and on the whole the most important goes back to October 1916. It is entitled "The Future of World Economy," and was spoken in the Prussian House of Deputies to a crowded audience, consisting largely of Ministers of State, members of Parliament, State officials and military officers—a sort of informal economic council of war—but publication was not allowed by the censor at the time on account of its outspokenness, and only now does it see light. There is nothing very heterodox, but on the contrary much that is extremely sane, in Harms' doctrine of world-economy as expounded *intra muros* during the war. What he told his hearers in 1916 was, in substance, that international commerce should be made as free from restraints as possible, that the ideas of self-contained economic units, exclusive trading, and mercantilistic heresies of all kinds, were impracticable in the modern world, and that whatever measures of attack and reprisal the belligerent nations might adopt against each other's trade

during war-time, they would be sure to break down under the pressure of circumstances, and particularly of self-interest, directly the world returned to reason.

It is creditable to Harms, then something of a voice crying in the wilderness, that he ventured to utter unpalatable truths of this kind at a time when he and his countrymen pretty generally still confidently counted on victory, refused to anticipate the possibility of even a peace of attrition, and spoke of a peace of compromise as tantamount to defeat. Much water has run down the Thames, the Seine and the Spree since then. A year or so ago we saw the spectacle of a body of economic experts of the Old and New Worlds reasoning together upon the question whether the real cure for the devastation, chaos and unsettlement wrought by the war must not be found in a policy diametrically opposed to the ideas embodied both in the German programme of a closed "Mittel-Europa" federation and the Resolutions of the Paris Economic Conference of June, 1916. Harms may fairly congratulate himself that the very men who passed the Paris Resolutions are to-day foremost in preaching the doctrine of the world's "economic solidarity" and in giving practical effect to it.

In the other chapters of the book the author emphasises the ideas for which he vainly sought acceptance early in the war, and particularly in the last chapter, which relates to the origin of and the preparations for the Economic Conference of May 1927. Citing a speech made in the House of Commons on November 17, 1914, in which Mr. Lloyd George predicted that after the war England would have no important competitor in foreign markets, with the exception of America, he points to the very different way in which events have shaped themselves, proving once again that the trade and prosperity of the world hang together, that nations are interdependent, and that the more advanced the economic development of an individual country becomes, the greater becomes also its stake in the welfare of its neighbours. Professor Harms' lectures run to great length, they are not quite as romantic as novels by Ethel Dell are said to be, but they are models of clear thinking and vigorous utterance.

W. H. DAWSON

Ruhrbesetzung und Weltwirtschaft. Edited by PROFESSOR DR. ERNST SCHULTZE. (Leipzig: G. A. Gloeckner. Pp. 256. 14*m*.)

THIS is one of the publications of the Institute for World Economy attached to the Leipzig Commercial College, and consists of a collection of twenty-three essays describing and

appraising the reactions of the French occupation of the Ruhr district in almost as many separate countries, and its influence upon international commerce and finance generally. In choosing his collaborators the editor had in mind the need for the objective treatment of the subject, and it may be said at once that the contributors have without exception succeeded in keeping clear of controversy, whatever qualifications may have been at the back of their minds. One turns first with natural curiosity to what Mons. G. H. Bousquet (formerly Secretary of the Austrian Financial Control Commission), the reporter for France, has to say on the subject. He frankly admits that the Ruhr occupation " seriously endangered the economic equilibrium of Europe "— " worsened " might be a truer term, as that equilibrium was disturbed already—since it paralysed one of the principal centres of the coal, iron and steel industries; but he contends that from the standpoint of France the occupation was attended by " relative success," and that the pessimistic forebodings to which it gave rise were not on the whole justified. He asserts that as a financial transaction the adventure did not pay its expenses in 1923, but that it covered them and gave something over in 1924, though not as much as was expected. Nevertheless, he does not believe the occupation, if prolonged, would have proved either financially or economically advantageous, because of the resulting political frictions and the condition of economic instability which it occasioned in France and all other countries. In other words, whatever the direct advantages it yielded, they were neutralised by harmful consequences of an indirect kind. The writer's conclusion that the Dawes plan is a better arrangement for France is indisputable, but it is strange that in drawing up his balance sheet he should have ignored a very important item on the debit side. The occupation was the last straw that broke the German camel's back, and it made necessary the Dawes scheme, with its liberal scaling down of the reparation payments. How large a part of the resulting gain to Germany represents loss not merely to France but to those of her late Allies who, though taking no active share in the Ruhr adventure, have to bear the larger part of the expenses ?

In a guarded chapter on the effects of the Ruhr occupation on Great Britain and the British Dominions Professor J. Busteed, of Cork, says that while the immediate effects were beneficial to the coal, iron and steel industries, damage was done to general trade, the woollen trades in particular suffering greatly, owing to the sharp rise in the cost of raw materials. Moreover, great loss was caused by the disastrous collapse of the mark, and the

sympathetic depreciation of other continental currencies. For the Dominions the occupation was an unmixed evil, since they were compelled to pay largely increased prices for coal and iron and steel products, while their export trade was impaired by the restriction of the purchasing power of continental buyers.

Reporting for the United States, Mr. Guy Greer, of New York, says that the Ruhr episode had little effect upon the total productive activity of American industry, but by throwing back the economic recovery of Europe it made continental countries more than ever America's debtors, though he does not venture to estimate to what extent. He puts the matter forcibly thus: "It was as if in the course of rebuilding a house after a disastrous fire, someone set fire to the tools and materials available for reconstruction." His final judgment is that "opinion in America has been and probably will remain divided as to whether the operation (*i.e.* the occupation) was politically necessary, but there can be no doubt that economically it was a disaster."

It may be added that the editor makes a somewhat ambitious attempt to estimate the effects of the Ruhr escapade for "world economy" as a whole. Inevitably guess-work plays a large part in his survey, as when he ventures to express the effects in money values. Thus he estimates the aggregate loss to Germany and the other countries affected at any sum between 750 and 1000 milliards of pounds sterling.

W. H. DAWSON

Die Kapitalexpansion der Vereinigten Staaten in Lateinamerika. By DR. H. T. COLLINGS, Professor of Economics, University of Philadelphia. (Jena: Gustav Fischer. Pp. 24.)

IT is the purpose of this brochure to trace the progress of the financial and commercial predominance which the United States have asserted during late years in the Latin countries of America. The movement began after the war with Spain in 1898, and was consummated by, and as the result of, the Great War. Dr. Collings assures us that America has really had this distinction thrust upon her. She had no wish to meddle in either international finance or politics, but circumstances were stronger than her modest wish to live and prosper unnoticed by the rest of the world. He is disposed to replace the maxim that "trade follows the flag" by "trade follows investment," and he can point to Cuba, Mexico, Brazil, Chile and other Latin countries in justification; for great as have been America's loans to these States, the money has come back to American industrial works in payment for railway material,

electrical, mining, agricultural and other machinery, and manufactured articles of all kinds, and much of the enterprise which has been financed by American money is altogether in American hands. He has to admit, however, that a subtle form of political penetration has taken place where borrowing States have been slow to pay interest and capital when due, and he says frankly that he does not like the practice of foreclosing and collecting customs duties, which has been followed in the case of certain of the weaker Central American republics. " But," he asks, " what other policy should be followed in such cases? Should we refuse credit to the republics which are in arrears with their payments? If we did they would simply go elsewhere for money—perhaps to Europe." It is impossible not to sympathise with Dr. Collings in his dilemna. We in England likewise have experience of States which refuse to meet their just engagements, though well able to do so. What we do in such cases is to scale down the existing debts generously at the expense of the taxpayers, who considerately proceed to lend the debtors more money.

W. H. DAWSON

Prospettive Economiche, Anno Ottavo, 1928. By GIORGIO MORTARA. (Università Bocconi, Milan. Pp. 534. 40 lire.)

THIS is the eighth of Professor Mortara's valuable series of annual surveys and forecasts of world economic conditions. The method adopted is to set out and discuss a number of international tables of production, consumption, foreign trade, etc., in recent years for each of the principal commodities of world trade, including transportation and hydro-electric power; then to treat more shortly of the Italian position in particular; and, lastly, to make a forecast of price movements and production in the immediate future. This volume thus makes a very useful companion to compilations of statistics such as are produced by the Secretariat of the League of Nations, for not only are many suggestive comparative tables provided which are not to be found elsewhere, but there is a considerable amount of comment on and deductions drawn from the figures given, which greatly enhance their value.

It is impossible to review in detail all the many topics dealt with in so bulky a work, but some observations may be made on the section on the grain trade. The author gives an interesting summary of the different reasons adduced for the decrease in the exportation of wheat from Russia, in spite of a series of good harvests recently and a total production approximately up to the

pre-war level. He comes to the conclusion that the most important causes are to be found in the rise in the standard of living and, therefore, in consumption by the peasants themselves; in the replenishment of exhausted stocks; and in the reconstitution of the live-stock population of Russia. Despite the smallness of the actual export figures, he holds that Russia is a most important potential factor in the European grain situation, since in the event of a shortage in the rest of Europe, and consequent high prices, very considerable quantities could be drawn from Russia.

In referring to the output of cereals in Italy, Professor Mortara points out that more than a quarter of the cultivated area of Italy is under cereals, and draws attention to the extent to which these crops are grown under unfavourable conditions in high Alpine valleys and in the arid regions of the south and of the islands. Nevertheless, on the average of the years 1925–6 there was a net import of cereals of all kinds, valued at 750,000,000 gold lire (£30,000,000). The author adds sadly that this sum "measures the heavy burden imposed on the Italian economic system by the importation of foreign cereals." It is surely surprising that an economist of the distinction of Professor Mortara should have allowed himself to be so far captured by the neo-mercantilism of Signor Mussolini that he can regard as a burden, *on economic grounds*, the fact that, in spite of protective duties on wheat, comparative costs should make it more profitable for Italy to export motor-cars and silk manufactures and therewith to buy cheap American wheat, than to produce it all at home under conditions of even greater real cost than those which at present prevail. The general conclusion on the world price of wheat is that, although total consumption is increasing, production in Europe and elsewhere is still expanding and, in the absence of bad harvests, shows no tendency to diminish, even in the face of a world-wide depression of farming profits. The price of wheat in the near future is thus more likely to go on falling than to rise.

Where so much has been provided it may seem ungrateful to ask for more, but it is impossible not to wish that Professor Mortara, with all this wealth of material at his command, had devoted some pages to a general discussion of the causes and effects and probable duration of a phenomenon of great importance to be found in practically all countries—the disparity between the prices of most manufactured articles and the prices of most raw materials, and especially of food-stuffs.

C. W. Guillebaud

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NOTES AND MEMORANDA

The United States Balance of Trade in 1927

The Balance of International Payments of the United States in 1927. By Ray Hall, with a Foreword by Herbert Hoover. (United States Department of Commerce Trade Information, Bulletin No. 552.)

The condensed Balance Sheet for 1927 as compared with 1926 is as follows :

($ millions.)	Claims from Foreigners.		Claims to Foreigners.		Difference.	
	1926.	1927.	1926.	1927.	1926.	1927.
Income Account.						
Merchandise, Silver, etc.	5,010	5,037	4,744	4,489	+266	+548
Transport Charges	196	229	188	172	+ 8	+ 57
Tourist Expenditures	142	153	709	770	−667	−617
Interest	735	795	268	281	+467	+514
War Debt Receipts	195	206	—	—	+195	+206
Immigrant Remittances	35	35	253	241	−218	−206
Charitable and Missionary Contributions	—	—	46	43	− 46	− 43
Other Items (Insurance, Royalties, etc.)	245	256	219	216	+ 26	+ 40
Total on Income Account	6,558	6,711	6,427	6,212	+131	+499
Capital Account.						
New American Investments abroad	—	—	1,357	1,648	−1,357	−1,648
Repayments and Resales on previous American Investments abroad	659	767	—	—	+ 659	+ 767
Foreign Investments in U.S. (net)	94	210	—	—	+ 94	+ 210
Increase or Decrease in net Debt of American Banks to Foreigners	359	200(?)	—		+ 359	+ 200
Gold Shipped or earmarked (net)	—	166	72	—	− 72	+ 166
Total on Capital Account	1,112	1,343	1,429	1,648	− 317	− 305
Discrepancy due to inaccurate figures	—	—	—	—	− 186	+ 194

Generally speaking, the Report is drawn up on the same lines as in previous years, but the following points are worth noticing :

(1) As in previous years, the net balance of new long-term

foreign investment by the United States is decidedly smaller than is generally believed—probably, indeed, somewhat less than Great Britain's. In 1927 the gross total shown is $671,000,000. But if we take off from this the gold shipped or earmarked, and an estimated figure of $200,000,000 for the increase in the net debt of American banks to foreigners, the true net figure comes out at $305,000,000. The corresponding figure for the previous year was $317,000,000. Thus the net American balance available for new foreign investment in 1927 was about £61,000,000 as compared with a corresponding balance of about £96,000,000 in the case of Great Britain.

(2) In the official return no figure is inserted this year for the change in the net debt of American banks to foreigners.[1] This is due to a somewhat surprising breakdown of the questionnaire on the basis of which figures were given for previous years. It seems that on this occasion the result of the questionnaire was to show an increase of $1,000,000,000 in the net debt of American banks to foreigners, a figure which appeared quite incompatible with all other indications. The matter was accordingly looked into more carefully, with the result that such very large errors were found—the discrepancy between the balances reported at the end of 1926 and those reported at the beginning of 1927 alone accounting for an error of some $300,000,000—that it was decided to ignore the results of the questionnaire altogether. Mr. Hall considers, however, that it would be compatible with general indications to assume an increase of $200,000,000 in the net indebtedness. He does not seem to have abandoned the estimates for previous years of the changes in the international banking account based on the same questionnaire. But it would certainly seem that previous results also should be held in grave doubt until the questionnaire has been put on a new and better basis. The breakdown illustrates the extraordinary difficulty of getting even approximately correct estimates on this important matter. It also leads one to doubt whether the estimates as to movements of long-dated investments by purchase and sale otherwise than in the new issue market are to be held as reliable. The gross figures of these are now so gigantic that even small percentage errors in the gross might result in serious errors in the net.

(3) There is the usual interesting estimate as to the expenditure of American tourists abroad. The estimate is based on the assumption that the "extravagant rich" spend $5,000 per trip

[1] In the table printed above I have inserted $200,000,000 for the reasons given below.

and other tourists from $1,800 down to $500 in the case of students and school teachers, leading up to an estimated average of $1,254 spent per person. On this basis the leading countries of expenditure came out as follows :

Canada	$197,000,000
France	$190,000,000
United Kingdom	$40,788,000
Italy	$31,250,000
Switzerland	$15,000,000

There are said to be about 4,000 Americans residing more or less permanently in Paris. The total expenditure by the "permanently departed" out of incomes derived from the United States is estimated at only $30,000,000—which seems surprisingly low.

(4) Immigrant remittances from the 15,000,000 foreign-born residents in the United States seem to be falling and to be less than is commonly supposed. The figure for 1927 is put at $241,000,000.

(5) It is interesting to note that it is now considered a slight offence against decency to publish separate estimates of the value of smuggled liquor, smuggled cocaine and morphia, the understatement of imports to evade duties, and losses by bad debts in foreign trade. Accordingly, all these dubious items are this year lumped together in the comparative decency of a single figure ($189,000,000). The dreadful details will only be known in future to the officials.

(6) The total foreign investments of the United States are now estimated at something between $11,500,000,000 and $13,500,000,000. A new estimate has been made as to the level of British investments in the United States. Mr. Hall estimates that the pre-war British long-term investments in the United States at the outbreak of war totalled about $2,700,000,000 —which compares with Sir George Paish's old figure of $3,500,000,000. Mr. Hall thinks that the corresponding total at the end of 1927 was about half the pre-war total, namely, $1,360,000,000.

(7) The payments received by the United States in 1927 on account of war debt payments amounted altogether to $206,000,000, of which $160,000,000 came from Great Britain.

J. M. Keynes

The French Stabilisation Law

The new Law fixing the French franc in terms of gold and making various other new provisions, which came into force on June 24, is set out below. The gold value fixed for the franc, which is equivalent to 124·21 francs to the £, was in accordance with expectations, being no more than a recognition of the *de facto* situation. Certain other provisions of the law, however, are unexpected. In particular, reserve provisions are laid down for the Bank of France on lines considerably different from those which have prevailed in France hitherto. The traditional French system has been to fix a maximum for the note issue from time to time, but to make no particular arrangements as to the amount or proportion of gold to be held against it—an arrangement in favour of which there is in modern conditions a great deal to be said, especially if the maximum is suitably varied from time to time. By the new Law, however, the Bank of France is required to conform with the new fashion of holding a rigid percentage gold reserve. This percentage is fixed at 35 per cent. and applies not only to the notes in circulation, but also to the Bank of France's current deposits and other sight liabilities. The result of this provision is to lock up irrevocably something approaching £200,000,000, the effective gold reserve of the Bank of France to meet a foreign drain or for any other purpose being such amount as the Bank may hold in excess of this figure.

It is interesting to note that the new Law also does away with the last remnants of the traditional bimetallism of France. The old five-franc pieces are to be demonetised and melted down, and silver will play no part in the future currency arrangements of the country.

The text of the Law, slightly abridged, is as follows :—

Article 1.—The provisions of Article 3 of the Law of August 5, 1914, provisionally fixing the value of notes issued by the Bank of France and the Bank of Algeria, are annulled.

Article 2.—The franc, the French monetary unit, consists of 65·5 milligrammes of gold, 900/1,000 fine. Payments in gold francs of the former denomination, which were arranged in earlier agreements, are not affected.

Article 3.—The Bank of France undertakes to convert its notes into gold at sight and on demand. It can do this either with legal gold currency or with gold bullion at the rate of 65·5 milligrammes, 900/1,000 fine, per franc. Pay-

ments of gold may be limited to the head office of the Bank, and to minimum quantities agreed upon with the Minister of Finance. Conversion will be effected by the Bank of Algeria under similar conditions. The Bank of France will buy gold at its head or branch offices at the rate of one franc per 65·5 milligrammes of gold, 900/1,000 fine, without deducting interest, but it may deduct mint charges. Assay charges will be borne by the seller.

ARTICLE 4.—The Bank of France will keep a reserve of gold bullion and coin worth at least 35 per cent. of the combined total of notes in circulation payable to bearer and of the credit balances of current accounts. Existing legal limits on the note issue are abolished.

ARTICLE 5.—The Mint will strike 100-franc gold coins, 900/1000 fine, within a margin of accuracy of one-thousandth by value and two-thousandths by weight either way. These coins will be unlimited legal tender.

ARTICLE 6.—The date and other conditions of the general issue of gold coins by the Currency Office will be fixed by Government decree. In the meanwhile, coins will be struck only by the Bank of France, and the minting charge will be 40 francs per kilogramme of gold, 900/1,000 fine.

ARTICLE 7.—To take the place of the Bank of France 5-franc, 10-franc, and 20-franc notes, which will be withdrawn from circulation before December 31, 1932, and will then cease to be legal tender, the Currency Office will strike, on the account of the State, silver coins of the nominal value of 10 francs and 20 francs, 680/1,000 fine. These must not exceed a total value of three milliards of francs. (This article, which has already been amended by the Finance Committee of the Chamber, originally provided for 5-franc pieces instead of 20-franc pieces.) The types of the new coins will be fixed by special decree. No individual will be compelled to accept more than 250 francs in silver coins. One-third of the proceeds of the minting of silver coins will be paid at the end of each Budget period into a fund for the upkeep of the coinage. The other two-thirds will be disposed of as arranged in the new Convention between the State and the Bank of France.

ARTICLE 8.—Chamber of Commerce tokens will be taken out of circulation as they come in, and coins of the same denominations will be issued by the State in their stead. Private individuals need not accept more than 50 francs worth

of aluminium-bronze alloy coins, or more than 10 francs worth of nickel or bronze coins.

ARTICLE 9.—All earlier gold and silver currency will cease to be legal tender on the date of promulgation of the present law.

ARTICLE 10.—Stocks of gold and silver, held by banks which have been granted powers of issue in Colonies and Protectorates where the franc is legal tender, will be revalued on the new monetary basis. The Minister of Finance is authorised to settle with such banks the conditions under which the State will receive credit for the resulting surplus.

ARTICLE 11.—Deposit accounts opened with the Central Treasury Fund by the Minister of Finance on December 17, 1920, are abolished. Article 104 of the Law of April 19, 1926, is withdrawn except as regards specially authorised accounts. The provisions of the present Law will come into force on July 1, 1928.

ARTICLE 12.—The Law of the 17th Germinal, year XI. and subsequent laws, controlling the minting and issue of money and the export of currency are withdrawn.

ARTICLE 13 approves the new Conventions between the State, the Bank of France, and the Caisse Autonome, by which the Bank of France undertakes to revalue in francs the stocks of gold in France, gold and reserves abroad, and silver which are shown in its weekly statement. It will also revalue in francs the bills bought by it from the Treasury in virtue of previous Conventions, and the gold, silver, and bills acquired in preparation for stabilisation. The surplus created by these revaluations will be used to redeem the outstanding temporary advances of the Bank to the Treasury, which will therefore be freed from its existing debt to the Bank. Treasury bonds held by the Bank under the agreement of February 3, 1927, which represent advances to foreign Governments, and are in fact composed by the Russian debt, will cease to bear interest for the Bank, and will be taken over and paid for gradually by the Caisse Autonome.

As soon as the new law is promulgated, the Bank of France will place a sum of three milliards of francs, free of interest, to the credit of the Treasury account. It will receive in return a Treasury bond of the same value, due for payment at the expiry of the new Convention on December 31, 1945. The Bank will be free to purchase short-dated bills for foreign issue banks in account with it. Its stock of silver

coins will be held by it for the present and will be transferred to the State as required for conversion into the new silver coinage.

The Convention between the State and the Caisse Autonome provides for the transfer to the Treasury of the claim on Soviet Russia. If the Russian bonds are not redeemed by December 31, 1945, the outstanding balance will be paid by the State. The Convention between the Caisse Autonome and the Bank of France also provides for the liquidation of the Russian bonds. Article 13, as amended by the Finance Committee of the Chamber, also has a clause to increase permanent advances to the State by two milliards in order to provide credits for agriculture, housing, and social services.

The first weekly return of the Bank of France (for June 25, 1928) in its new form showed in terms of sterling the following gigantic total of gold and foreign currency assets, which is more than three times the gold holdings of the Bank of England :—

	£
Gold coin and ingots	233,000,000
Cash available at sight abroad . .	129,000,000
Forward foreign exchange purchased .	79,000,000
Negotiable securities bought abroad .	87,000,000
	£528,000,000

Since June the forward foreign exchange purchased has been running off and has been mainly replaced by other forms of foreign assets and of gold, the figures of August 16, corresponding to the above, being as follows :—

	£
Gold coin and ingots	244,000,000
Cash available at sight abroad . .	117,000,000
Forward foreign exchange purchased .	49,000,000
Negotiable securities bought abroad .	125,000,000
	£535,000,000

It would seem possible that the part of the reserve held in gold has not yet reached as high a figure as the Bank would like. In any case, it is clear that the provisions of the new French Law are of a kind to confirm the anxieties of those who have been

anticipating that the supply of monetary gold might be inadequate to the requirements of the world after the general return to the Gold Standard. It is evident that if every country were to lock away 35 per cent. of the sight liabilities of its State Bank and then to hold some substantial amount in excess of this in order to feel comfortable, there would be a steady deflationary pressure which, failing wiser courses, might continue over a long period. At any rate the future of gold now lies in the hands of the Bank of France as well as in those of the Federal Reserve System.

J. M. K.

Currency and Bank Notes Act, 1928

The following is the text of the new Act as finally passed into law.

An Act to amend the law relating to the issue of bank notes by the Bank of England and by banks in Scotland and Northern Ireland, and to provide for the transfer to the Bank of England of the currency notes issue and of the assets appropriated for the redemption thereof, and to make certain provisions with respect to gold reserves and otherwise in connection with the matters aforesaid and to prevent the defacement of bank notes. [2nd July 1928.]

Amendment with respect to powers of Bank of England to issue bank notes.

1.—(1) Notwithstanding anything in any Act—

(*a*) the Bank may issue bank notes for one pound and for ten shillings:

(*b*) any such bank notes may be issued at any place out of London without being made payable at that place, and wherever issued shall be payable only at the head office of the Bank:

(*c*) any such bank notes may be put into circulation in Scotland and Northern Ireland, and shall be current and legal tender in Scotland and Northern Ireland as in England.

(2) Section six of the Bank of England Act, 1833 (which provides that bank notes shall be legal tender), shall have effect as if for the words "shall be a legal tender to the amount expressed "in such note or notes and shall be taken to be valid as a tender "to such amount for all sums above five pounds on all occasions "on which any tender of money may be legally made" there were substituted the words "shall be legal tender for the payment of any amount."

(3) The following provisions shall have effect so long as subsection (1) of section one of the Gold Standard Act, 1925, remains in force—

(*a*) notwithstanding anything in the proviso to section six of the Bank of England Act, 1833, bank notes for one pound or ten shillings shall be deemed a legal tender of payment by the Bank or any branch of the Bank, including payment of bank notes :

(*b*) the holders of bank notes for five pounds and upwards shall be entitled, on a demand made at any time during office hours at the head office of the Bank, or in the case of notes payable at a branch of the Bank, either at the head office or at that branch, to require in exchange for the said bank notes for five pounds and upwards bank notes for one pound or ten shillings.

(4) The Bank shall have power, on giving not less than three months' notice in the London, Edinburgh and Belfast Gazettes, to call in the bank notes for one pound or ten shillings of any series on exchanging them for bank notes of the same value of a new series.

(5) Notwithstanding anything in section eight of the Truck Act, 1831, the payment of wages in bank notes of one pound or ten shillings shall be valid, whether the workman does or does not consent thereto.

2.—(1) Subject to the provisions of this Act the Bank shall issue bank notes up to the amount representing the gold coin and gold bullion for the time being in the issue department, and shall in addition issue bank notes to the amount of two hundred and sixty million pounds in excess of the amount first mentioned in this section, and the issue of notes which the Bank are by or under this Act required or authorised to make in excess of the said first mentioned amount is in this Act referred to as "the fiduciary note issue." **Amount of Bank of England note issue.**

(2) The Treasury may at any time on being requested by the Bank, direct that the amount of the fiduciary note issue shall for such period as may be determined by the Treasury, after consultation with the Bank, be reduced by such amount as may be so determined.

3.—(1) In addition to the gold coin and bullion for the time being in the issue department, the Bank shall from time to time appropriate to and hold in the issue department securities of an **Securities for note issue to be held**

in issue department. amount in value sufficient to cover the fiduciary note issue for the time being.

(2) The securities to be held as aforesaid may include silver coin to an amount not exceeding five and one-half million pounds.

(3) The Bank shall from time to time give to the Treasury such information as the Treasury may require with respect to the securities held in the issue department, but shall not be required to include any of the said securities in the account to be taken pursuant to section five of the Bank of England Act, 1819.

Transfer of currency notes issue to Bank of England.

4.—(1) As from the appointed day all currency notes issued under the Currency and Bank Notes Act, 1914, certified by the Treasury to be outstanding on that date (including currency notes covered by certificates issued to any persons under section two of the Currency and Bank Notes (Amendment) Act, 1914, but not including currency notes called in but not cancelled) shall, for the purpose of the enactments relating to bank notes and the issue thereof (including this Act) be deemed to be bank notes, and the Bank shall be liable in respect thereof accordingly.

(2) The currency notes to which subsection (1) of this section applies are in this Act referred to as "the transferred currency notes."

(3) At any time after the appointed day, the Bank shall have power, on giving not less than three months' notice in the London, Edinburgh and Belfast Gazettes, to call in the transferred currency notes on exchanging them for bank notes of the same value.

(4) Any currency notes called in but not cancelled before the appointed day may be exchanged for bank notes of the same value.

Transfer to Bank of certain part of assets of Currency Note Redemption Account.

5.—(1) On the appointed day, in consideration of the Bank undertaking liability in respect of the transferred currency notes, all the assets of the Currency Note Redemption Account other than Government securities shall be transferred to the issue department, and there shall also be transferred to the issue department out of the said assets Government securities of such an amount in value as will together with the other assets to be transferred as aforesaid represent in the aggregate the amount of the transferred currency notes.

For the purpose of this subsection the value of any marketable Government securities shall be taken to be their market price as on the appointed day less the accrued interest, if any, included in that price.

(2) Any bank notes transferred to the Bank under this section shall be cancelled.

(3) Such of the said Government securities as are not transferred to the Bank under the foregoing provisions of this section shall be realised and the amount realised shall be paid into the Exchequer at such time and in such manner as the Treasury direct.

6.—(1) The Bank shall, at such times and in such manner as may be agreed between the Treasury and the Bank, pay to the Treasury an amount equal to the profits arising in respect of each year in the issue department, including the amount of any bank notes written off under section six of the Bank Act, 1892, as amended by this Act, but less the amount of any bank notes so written off which have been presented for payment during the year and the amount of any currency notes called in but not cancelled before the appointed day which have been so presented. Profits of note issue to be paid to Treasury.

(2) For the purposes of this section the amount of the profits arising in any year in the issue department shall, subject as aforesaid, be ascertained in such manner as may be agreed between the Bank and Treasury.

(3) For the purposes of the Income Tax Acts, any income of, or attributable to, the issue department shall be deemed to be income of the Exchequer, and any expenses of, or attributable to, the issue department shall be deemed not to be expenses of the Bank.

(4) The Bank shall cease to be liable to make any payment in consideration of their exemption from stamp duty on bank notes.

7. Section six of the Bank Act, 1892 (which authorises the writing off of bank notes which are not presented for payment within forty years of the date of issue), shall have effect as if, in the case of notes for one pound or ten shillings, twenty years were substituted for forty years, and as if, in the case of any such notes being transferred currency notes, they had been issued on the appointed day and, in the case of any such notes not being transferred currency notes, they had been issued on the last day on which notes of the particular series of which they formed part were issued by the Bank. Amendment of s. 6 of 55 & 56 Vict. c. 48.

8.—(1) If the Bank at any time represent to the Treasury that it is expedient that the amount of the fiduciary note issue shall be increased to some specified amount above two hundred Power to increase amount of fiduciary note issue.

and sixty million pounds, the Treasury may authorise the Bank to issue bank notes to such an increased amount, not exceeding the amount specified as aforesaid, and for such period, not exceeding six months, as the Treasury think proper.

(2) Any authority so given may be renewed or varied from time to time on the like representation and in like manner:

Provided that, notwithstanding the foregoing provision, no such authority shall be renewed so as to remain in force (whether with or without variation) after the expiration of a period of two years from the date on which it was originally given, unless Parliament otherwise determines.

(3) Any minute of the Treasury authorising an increase of the fiduciary note issue under this section shall be laid forthwith before both Houses of Parliament.

Amendment as to issue of notes by banks in Scotland and Northern Ireland.

9.—(1) For the purpose of any enactment which in the case of a bank in Scotland or Northern Ireland limits by reference to the amount of gold and silver coin held by any such bank the amount of the notes which that bank may have in circulation, bank notes held by that bank or by the Bank on account of that bank, shall be treated as being gold coin held by that bank.

(2) A bank in Scotland or Northern Ireland may hold the coin and bank notes by reference to which the amount of the bank notes which it is entitled to have in circulation is limited at such of its offices in Scotland or Northern Ireland, respectively, not exceeding two, as may from time to time be approved by the Treasury.

Amendment of s. 6 of 7 & 8 Vict. c. 32.

10. The form prescribed by Schedule A to the Bank Charter Act, 1844, for the account to be issued weekly by the Bank under section six of that Act may be modified to such an extent as the Treasury, with the concurrence of the Bank, consider necessary, having regard to the provisions of this Act.

Power of Bank of England to require persons to make returns of and to sell gold.

11.—(1) With a view to the concentration of the gold reserves and to the securing of economy in the use of gold, the following provisions of this section shall have effect so long as subsection (1) of section one of the Gold Standard Act, 1925, remains in force.

(2) Any person in the United Kingdom owning any gold coin or bullion to an amount exceeding ten thousand pounds in value shall, on being required so to do by notice in writing from the Bank, forthwith furnish to the Bank in writing particulars of the gold coin and bullion owned by that person, and shall, if so required by the Bank, sell to the Bank the whole or any part

of the said coin or bullion, other than any part thereof which is bonâ fide held for immediate export or which is bonâ fide required for industrial purposes, on payment therefor by the Bank, in the case of coin, of the nominal value thereof, and in the case of bullion, at the rate fixed in section four of the Bank Charter Act, 1844.

Penalty for defacing bank notes.

12. If any person prints, or stamps, or by any like means impresses, on any bank note any words, letters or figures, he shall, in respect of each offence, be liable on summary conviction to a penalty not exceeding one pound.

Short title, interpretation and repeal.

13.—(1) This Act may be cited as the Currency and Bank Notes Act, 1928.

(2) This Act shall come into operation on the appointed day, and the appointed day shall be such day as His Majesty may by Order in Council appoint, and different days may be appointed for different purposes and for different provisions of this Act.

(3) In this Act, unless the context otherwise requires,—

The expression " the Bank " means the Bank of England :

The expression " issue department " means the issue department of the Bank :

The expression " bank note " means a note of the Bank :

The expression " coin " means coin which is current and legal tender in the United Kingdom :

The expression " bullion " includes any coin which is not current and legal tender in the United Kingdom.

(4) The enactments set out in the Schedule to this Act are hereby repealed to the extent specified in the third column of that Schedule.

SCHEDULE

Enactments Repealed

Session and Chapter.	Short Title.	Extent of Repeal.
7 & 8 Vict. c. 32.	The Bank Charter Act, 1844.	Sections two, three, five and nine, in section eleven the words from "save and except that" to the end of the section, sections thirteen to twenty, and section twenty-two, and, so far as relates to England, sections ten and twelve.
24 & 25 Vict. c. 3.	Bank of England Act, 1861.	Section four, so far as unrepealed.
4 & 5 Geo. 5. c. 14.	The Currency and Bank Notes Act, 1914.	The whole Act, except subsection (5) of section one and section five.
4 & 5 Geo. 5. c. 72.	The Currency and Bank Notes (Amendment) Act, 1914.	The whole Act.
5 & 6 Geo. 5. c. 62.	The Finance Act, 1915.	Section twenty-seven.
15 & 16 Geo. 5. c. 29.	The Gold Standard Act, 1925.	Paragraph (*b*) of subsection (1) of section one.

Official Papers

Committee on Industry and Trade. Survey of Textile Industries. Being Part III of a Survey of Industries. (Stationery Office. Pp. 328. 3*s.* 6*d.*)

When the Balfour Committee was appointed in 1924 its wide terms of reference and the urgency of the problems which faced it made the magnitude of its task apparent. In this unenviable position it was happy in its decision to postpone the final report until it had had sufficient time to digest the mass of information laid before it and to issue, from time to time, volumes based upon the material presented, either by private industry or by Government departments. The present survey of textile industries is the sixth and last of the preparatory reports. These reports are largely based upon information and discussions which normally would be published as minutes of

Evidence. It is to be hoped, however, that the reports will not be regarded as an alternative to the minutes themselves. The preliminary volumes have served their purpose. They have lightened the task of the reader; explained succinctly facts which were probably brought out slowly by days of cross-examination and discussion; enabled pros and cons to be brought into convenient proximity. It is no disparagement of the work of the Committee or its servants when we say that to dispense wholly with the publication of the minutes of Evidence would be to place the public, and particularly the student, in an undesirable position of dependence upon the skill in presentation or judgment in choice, however great these may be, of those engaged in the preparation of these volumes.

The present volume deals with the cotton, wool, and artificial silk industries, though the treatment of the last named is slight, both because of the lack of statistics and of its immaturity of form. The bulk of the report consists of a detailed examination of the conditions of the wool and cotton industries. Large appendices of statistics group together the basis of the Committee's findings. The study of these two industries seeks to be informative; the aim is to bring together from published work, presented evidence or special inquiries undertaken by the Committee, sufficient of the history, structure and trade accounts of the industries to place the present depression in an appropriate background of time and space. It is precisely in this that both the strength and weakness of the report are to be found. It has the qualities of balance, grasp and perspective. It lacks incisiveness. It is rarely critical, sometimes indefinite, too often compromising. It contains the most complete view in existence of the industries covered, and it shows a praiseworthy skill in compilation; a vast amount of material has been collected and sifted; many special kinds of investigation have been followed with profit; the volumes published up to date have been fitted into an ingenious framework. But in many cases where conflicting evidence has been presented the Committee could hardly have been informative without being critical, and here it has usually been content to place the different cases side by side; it has been almost timid in its refusal to give a lead or to push reasoning to its logical conclusion. It must be admitted that the purpose of this volume is limited to description, and that the Committee must not be judged before it has had time to round off its work in a Final Report of criticism and recommendation. Even this hardly justifies the peculiar detachment from the

gravity of the questions which the report reveals, and, although the Committee is scientific in its caution, in generalisation it carries this attitude to a point inconsistent with its primary purpose—that of suggesting remedies. If the final report is to be produced on no more definite information than is contained in these inconclusive analyses, we must look forward either to a unanimous report which will avoid the fundamental problems, or to a series of minority reports which will much weaken the value of the Committee's labours.

The report very skilfully draws together information from many sources. Its principal findings may be most easily summarised by comparing the cotton and wool industries. The industries have a similar type of organisation, both were among the earliest established in the country; in each case the industry is highly localised in districts for which natural advantages of climate and proximity to power are claimed. The specialisation of businesses by process in the cotton industry finds its counterpart in the worsted section of the wool industry, but not in the woollen section, where the vertical type of firm is most common.

The widespread persistence of the small, personally conducted firm of the wool industry is matched by the small weaving firm in the cotton industry, though the cotton-spinning firm has now reached a large average size. Each industry draws the bulk of its staple raw material from abroad. Marketing processes in the industries provide further parallelism. The cotton industry exports 70 to 80 per cent. of its output, whilst the wool industry exports about half of its products. Both industries market a commodity the demand for which is constantly changing, both in direction and volume, though the wool industry is probably feeling the competition of alternative fabrics much more than the cotton. There are, however, also very important differences here. The bulk of cotton goods exported find their way into the far Eastern markets, the wool textile industry has its most important customers in the temperate industrial countries, in particular those of Western Europe. It follows that the wool industry has probably felt the actual dislocation of markets in the post-war period more acutely than has the cotton industry. The wool industry is not so homogeneous as the cotton, since the two distinct products of the former, woollens and worsteds, compete in many markets. The decrease in exports from the United Kingdom of worsted tissues to the U.S.A. is explained by the Committee as due to the replacement of worsteds by woollens. The methods of marketing also differ. Practically

the whole of the export trade in the cotton industry is in the hands of export merchants, whilst in wool a good deal of their own foreign trade, and most of their home trade, is done by the manufacturers themselves. Since the merchant failures of 1920 the manufacturers in wool have taken over a larger share of the exporting operations. But the figures which the Committee gives concerning changes in production and exports will command the greatest attention. Before the war output in both industries was steadily expanding, though different sections of each industry were experiencing different fortunes. Thus the manufacture of worsted cloth was declining, whilst that of woollen cloth was expanding. There was, however, a significant difference between the cotton and wool industries. The increasing output in the cotton industry was taken largely by an increase in exports, whilst in wool the increasing output was absorbed by the home market, the export trade remaining stationary. Since the war the decline in output, and therefore the problem of readjustment, has been greater in cotton than in wool. The Census of Production shows, though the figures are in some degree estimates, that between 1912 and 1924 the reduction in output (taking 1912 = 100) was tops to 94; noils to 88; yarns to 98; woollen and worsted tissues to 80; whilst in cotton, yarn fell to 70 and piece goods to 67. The courses of the exports of the two industries show different tendencies since 1924. Exports of cotton manufactures have, on the whole, been steady; those of wool have fluctuated often in a downward direction. It is possible to state, however, from the material which the Committee presents that, in 1924, the cause of the decline in the wool textile industry was a fall off in the home market; in the cotton industry it was due principally to a drop in exports. Whilst the Lancashire cotton industry was being ousted by other countries the wool industry was being displaced by other fabrics.

When the Committee confines itself to the field of fact in this way, it is able to produce a clear-cut picture of the present condition of these two industries. With the resources at its command it could hardly have done less. When it turns to deal with causes and to draw conclusions which might point the way to possible remedies and recommendations, the quality and value of the work fall. The covering letter which accompanies the present report expresses the hope that "the six volumes which we have now completed will not only be found of practical utility in relation to the problems of the present time, but will also prove of permanent value as a record for future reference." For

this volume, there is much more substance in the second part of this aspiration than in the first. The section dealing with the cotton industry, with which the remainder of this notice will deal, was received with a feeling of great disappointment. The long introduction and historical chapter; the recital of much that was, and has long been, known; the failure to press on to conclusions—all these were regarded, perhaps unreasonably, as tantamount to the calling of a phrenologist instead of a doctor to a dying man. It is difficult to discover from the Report what causes the Committee believes responsible for the present depression in the cotton industry, and in what order of importance they should be ranged. That foreign industries are ousting Lancashire goods from many markets is not an explanation of the depression, but merely a statement of it. The Committee refers to the effects of the recapitalisation period of 1919 and 1920, but makes no effort to determine what effect this has had upon the price of yarn. Even in a recital of possible causes there is some omission. The gap between textile and general prices up to 1924 is not to be ignored. It is all the more curious that the Committee has not referred to this point, since in an earlier volume [1] it mentions the disparity of movement in price level of imports and exports of the United Kingdom since 1913.

The effect of short time in forcing up the margins between raw cotton and yarn in order that price should cover cost of production seems to be a point of more consequence than the Committee believes. The Report might with great profit have dealt with the whole question of the method by which the industry raises its capital. It would have found but few dissentients if it had whole-heartedly condemned the system which piles up fixed interest securities in an industry in which depression has always been frequent. The historical retrospect combined with the history of the present depression should have suggested that the industry is particularly susceptible to cut-throat competition. The large capital investments and the high proportion of bonds and loans, the multiplicity of producers, the tendency to accumulate stocks, the lack of systems of cost accounting, the unscientific methods of allocating overheads—all these render this industry prone to those various forms of business suicide known as spoiling the market. Upon all of which subjects the Committee must have a great deal of information, but is almost silent in this volume.

There are three questions upon which the industry, tired of the controversy of the past five or six years, was expecting some

[1] "Survey of Overseas Markets," p. 4.

guidance and light. The first is that of comparative international costs. How far is the progress of foreign textile industries due to their own increasing efficiency and how far due to the decreasing efficiency of the Lancashire industry? This is a thorny question. The Indian Tariff Board of 1927 tackled the problem, and failed to produce anything of value. But certain private investigations, particularly those of W. B. Cunningham, "Report on Cotton Spinning and Weaving in Japan," and B. Ellinger in a paper read before the Manchester Statistical Society last year, suggest that the solution is not impossible. The Committee in a previously issued Report [1] has brought forward material concerning the changes in the cost of industrial production in many industries, and it is probably safe to deduce from the figures given therein of net output value per head; amount of power available per head; and total and labour cost per unit of output, that the cotton industry is less efficient than before the war, and has become less efficient in competition relatively to other British industries than was formerly the case.

These conclusions throw only indirect light on the question of international costs. It is to be regretted that the Committee should have allowed the opportunity to slip of placing this question beyond the reach of discussion, and thus stifling fallacies of the kind of which it itself appears to be guilty on page 12, when it declares that "the development of the cotton industry in many foreign countries was further encouraged by the fact that labour could be obtained at lower rates of wages than these current in Lancashire." There is no proof that labour costs are lower in Eastern countries than in Lancashire.

Secondly, there is a great deal of uncertainty and confusion as to the comparative merits of the vertical and horizontal type of firm. It has become fashionable to descry the present Lancashire industrial structure consisting of a number of non-sympathetic horizontal layers. In particular the disassociation of merchanting from production has been severely criticised. The success of Japan and other countries is commonly attributed to their adoption of the vertical firm. There are, however, many more sides to this question than is commonly imagined. The businesses in the early English cotton industry were, even in 1840, largely "mixed" firms, and the present specialisation is the result of adaptation to changing circumstance. It may be that the scale of production in Lancashire enjoins a firm of business which is not suitable elsewhere. Many of the

[1] "Further Factors in Industrial and Commercial Efficiency."

present "mixed" firms run their spinning and weaving departments as independent units. But on all these points of dispute the Committee sits firmly on the hedge.

In the third place, it was expected that the Committee would provide a summing up and a judgment on the effect of the action of the finishers' combines since 1920. It was, indeed, in an excellent position to bring to an end a long-standing controversy. It had received evidence from shipping merchants and the combines. It had before it the results of the 1924 census of production. In this case the Committee's determination to withdraw from all decision is most marked. The arguments on both sides are left to plead for themselves. Avenues which might have been explored have been ignored. If it is asserted that, due to high finishing charges in this country, a good deal of cloth is being shipped to the countries of Western Europe to be finished, the easiest, though not necessarily a conclusive, test of this would have been to determine whether the finishing industries in these countries had increased in output and equipment. The whole argument which seeks to condemn or defend the combines by considering the relative changes in the exports of grey and finished goods is irrelevant, since the demand schedules for the different types of cloth may have changed in varying manner. It is inconclusive, perhaps misleading, to show that the exports of grey cloth to Western Europe have increased, implying that much of this cloth was formerly finished in England and is now going to be finished in other countries. The Trade Accounts of many of these countries are drawn up in such a form that goods "in transit"—merely entering the country to undergo some process and then to be re-shipped elsewhere—can be distinguished, and the Committee might well have made use of such material.

It is characteristic of this report that it gives no clue to the recommendations which the Committee are likely to make concerning the cotton industry. A more detailed study of the Yarn Association, the only body which attempted to meet the changed conditions of the industry in a scientific manner, would have well repaid the effort, for the causes of the failure of the Association are, in small, the causes of the depression. How far, for example, will the economies of buying and selling which the Association claims for the scheme which it has before the industry at the moment prove real? What economies of large-scale production are likely to arise? Are the possibilities of the double shift great enough to merit trial? What light does the experience of textile cartels in Germany and other countries throw upon our own case?

Definite and authoritative answers on such questions might do much to influence the judgment and stiffen the will of those who are impeding the only method of permanent stabilisation in the cotton industry—the establishment of some form of central control over production and sale.

JOHN JEWKES

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OBITUARY

LORD HALDANE

WE learn with great regret, as we go to press, of the death on August 19, of Viscount Haldane of Cloan, at the age of seventy-two. Lord Haldane had been President of the Royal Economic Society for more than twenty years, having succeeded Lord Goschen in the office on the death of the latter in 1907. He took little part in the current business of the Society, and seldom attended meetings of the Council. But he regularly presided at the annual meetings on those occasions when a paper was read and there was something more than the usual formal business to attract the attendance of members. Lord Haldane's great services to the causes of education and of scientific research have been widely acknowledged; and he was always forward to aid economic studies in particular, notably in his connection with the foundation of the London School of Economics. We mourn one who invariably used his great influence in affairs to promote the scientific approach to the problems of government and to harness science and knowledge to the practical service of the State.

GIUSEPPE PRATO

IT is with the greatest sorrow that we announce the premature death, on August 18, of Prof. Giuseppe Prato, of the Institute of Commercial Studies in Turin,—a man who had been an ornament and pride of Italian economic science. Possessed of a wide historical, economic and literary culture, an enthusiast of learning and an indefatigable worker, he had, in his not very long career, published a great number of important and profound writings, designed to illustrate the various aspects of economic life, above all in Piedmont. We recall his great work on the economics of Piedmont in the eighteenth century, and his other books on the earliest Piedmontese banks, on the agrarian association of

Piedmont, on the influences of the World War on Piedmont's economy (published in the Carnegie Endowment Series), on the fuel problem, on the Piedmontese saving banks, etc. But his extraordinary activity did not overlook the general problems of our age, and the learned world knows well his leading work on Workmen's Protection (translated into French) as well as his other books on Law's System, on the custom duties of the towns, on the labour question, and the excellent book, published in the last days of his life, on the better methods of capital investment. A decided follower of the Liberal school, he submitted to severe criticism the various forms of the economic action of the State during the World War, and struggled with the greatest energy against the collective labour bargains, which, in his view, are absolutely contrary to the interest of the workers themselves. His death causes to Italian economic science a hardly reparable loss, and leaves his numerous friends and admirers with a regret that the course of time will not be able to cancel.

ACHILLE LORIA

CURRENT TOPICS

THE International Union for the Scientific Investigation of Population Problems has now been definitely established, and will shortly be setting up a permanent office in Paris. The first meeting of the Union was held in Paris early in July, when Sir Bernard Mallet and Professor F. A. E. Crew, were among the representatives of Great Britain. Professor Raymond Pearl of the United States was appointed the first President, with Professor Gini (Italy), Professor Léon Bernard (France), and Sir Bernard Mallet (England), as Vice-Presidents. The Union, which comprises representatives of Great Britain, the United States, France, Germany, Italy, Switzerland, Belgium, Spain, Japan, Scandinavia, South America, the British Dominions and Russia, proposes to keep itself completely clear of all propaganda activities. According to its constitution, it "confines itself solely to scientific investigation in the strict sense and refuses either to enter upon religious, moral, or political discussion, or as a Union to support a policy regarding population of any sort whatever, particularly in the direction either of increased or of diminished birth rates." Its first act has been to appoint three Commissions, the first to deal with Population and Food Supply, the second with Differential Fertility, Fecundity, and Sterility, and the third

with Vital Statistics of Primitive Races. The British representatives are Sir Henry Rew on the first Commission, Professor Crew, Mr. T. H. Stevenson and Professor Carr-Saunders on the second Commission, and Mr. Malinowski and Mr. G. Pitt-Rivers on the third Commission. Any inquiries as to the work of the Union, pending the appointment of a General Secretary and the setting up of the Paris office, may be addressed to Sir Bernard Mallet, K.C.B., 8 Eccleston Square, London, S.W.1, Chairman of the British National Committee.

The Statistical Department of the Board of Trade is much to be congratulated on having brought their work on an official Index of Production to a point at which the preliminary results can be published, the following table having appeared in the July *Board of Trade Journal*. The weights used for different industries are based on the Census of Production.

Index of production in 1924 = 100.

Group.	Index number. 1927.	Index number. 1st quarter 1928.
1. Mines and quarries	94·7	96·4
2. Iron and steel and manufactures thereof	109·8	105·6
3. Non-ferrous metals	104·3	115·5
4. Engineering and shipbuilding	117·4	114·4
5. Textiles	103·6	109·7
6. Chemical and allied trades	110·2	117·4
7. Paper and printing	(A)	(A)
8. Leather, boots and shoes, and rubber	126·7	147·5
9. Food, drink, and tobacco	99·8	98·6
10. Gas and electricity	130·4	(B)
Total of above groups	107·8	108·5

(A and B: Complete information not yet available.)

If this is compared with the pioneer work done by Mr. Rowe for the London and Cambridge Economic Service the result is as follows :—

	Mr. Rowe.	Board of Trade.
1927	105·6	107·8
1928, 1st quarter	102·8	108·5

It would seem that Mr. Rowe's lower figures are partly explained by his having no data for groups 8 and 10 above, which seem to be specially prosperous as compared with 1924.

THE *Board of Trade Journal* has also started the monthly publication of Post Office figures which may prove to be of considerable interest as an indicator of general trade conditions, namely the average receipts of the Post Office per working day, excluding telegraph and telephone, savings bank, and money and postal order business, but including receipt stamp and other revenue duties :—

Period.	1924.	1925.	1926.	1927.	1928.
January	£106,920	£112,158	£117,608	£119,433	£126,696
February	104,963	110,795	115,699	116,345	122,406
March	108,853	115,997	121,848	122,381	127,995
April	111,532	114,366	117,864	121,943	126,310
May	112,019	116,702	91,152	123,775	123,669
June	113,600	115,191	115,732	120,321	124,575
July	115,052	117,291	114,898	122,768	—
August	108,686	111,677	110,928	117,278	—
September	115,184	119,287	116,839	124,925	—
October	117,881	120,392	122,351	129,158	—
November	115,357	120,649	124,504	128,843	—
December	145,367	152,151	154,157	159,017	—
Year	£114,618	£118,888	£118,632	£128,516	—

Putting this against the Index of Production quoted above, we find :—

	Index of Production.	Post Office Business.
1924	100	100
1927	107·8	112·1
1928, 1st quarter	108·5	109·7

THE Social Science Research Council (United States) announces plans to establish a *Journal of Abstracts in the Social Sciences* with the following objects :

"There are so many books, pamphlets and reports constantly being published and so many periodicals both scientific and semi-scientific steadily pouring from printing houses both here and abroad, that it is physically impossible for any one to keep abreast of all the literature even in his own special field of work. To overcome these difficulties, a journal is proposed which will save an almost infinite amount of time and labour on the part of research workers, by giving them in one journal complete citations and short but objective abstracts of all important new materials, and will at the same time draw together the several disciplines by

serving them all through one journal based upon some systematic classification, and improved by numerous cross-references to the materials in other fields. Other important advantages of such a publication could easily be stated. It will save much duplication and waste of effort, it will apprise the worker of the existence of other specialists working on his problems and stimulate correspondence between them, it will call attention to new methods of research, it will serve as a permanent record of the work already accomplished, and will in many other ways promote the healthy development of the sciences to which it relates."

An Organizing Committee has been appointed, consisting of eminent scholars; and a number of advisory committees have been appointed in the fields of cultural anthropology, economics, history, human geography, political science, sociology, and statistics.

Social Science Abstracts will be issued monthly during the year, and in each issue will appear systematic abstracts of new information published in the fields indicated for the preceding month or months. The test of published materials to be abstracted will in general be the criterion of *new information*, in the sense of important factual studies and contributions to theory and opinion, in the fields of the social sciences indicated. This will require the careful scrutiny of articles in periodicals, pamphlets, bulletins, monographs, and new books. It is conservatively estimated that the annual number of abstracts will run to fifteen or twenty thousand titles the first year. The abstracts will be cross-referenced and annual indexes published. It is hoped that the first number may be published within the present calendar year.

THE Norman Wait Harris Memorial Foundation for the Study of International Relations held its Fifth Institute from June 18 to June 30, 1928, at the University of Chicago under the direction of Professor Quincy Wright, secretary of the foundation. The sessions included a number of lectures by authorities and daily Round Table conferences for the discussion of the general topic of "Foreign Investments." About fifty economists, bankers and others were invited. The lecturers included Professors Gustav Cassel from Stockholm; T. E. Gregory, London School of Economics; Robert R. Kuczynski, Berlin; Henry K. Norton, Washington, D.C.

OUR Japanese Correspondent writes :—

" Although the banking reorganisation after the nation-wide panic of 1927 was carried out under great difficulties by the Tanaka Cabinet, yet its position is very far from being enviable from the political point of view. The 54th Diet, which was opened on 21st of January, 1928, was dissolved on the same day, leading to the adoption for 1928–29 of the Budget for the previous fiscal year as fixed in the constitution. The subsequent elections were made under the new election act of universal suffrage, and the appearance of eight Labour Members for the first time in the Diet is admitted as an epoch-making fact. The Labour Members are expected to increase in numbers and activity, and the movement is being keenly watched by the nation. It is a matter of much congratulation that the Labour Movement is inclining towards parliamentarism. However, the spread of communistic ideas, especially among young students and the intelligenzia class, is a matter now absorbing the attention of the whole nation.

" Among many noteworthy works published since the previous report, Prof. Hijikata's *Economic Investigation in Japan* must be specially mentioned. It is in three volumes of 1700 pages, sold at 25 yen, and published by Nihon Horonsha. Another to be mentioned is *System of Social Problems*, by Dr. Kawada, which is divided into (Vol. I) General Remarks; (Vol. II) The Wage System; (Vol. III) Labour Unions; (Vol. IV) Labour Disputes and Settlement; (Vol. V) Minimum Wages, etc., at prices between 2.70 yen and 3.20 yen per volume, and published by Yuhikaku."

RECENT PERIODICALS AND NEW BOOKS

Journal of the Royal Statistical Society.

PART II. 1928. *The Post-war Depression in the Lancashire Cotton Industry.* G. W. DANIELS and J. JEWKES. *The Vital Statistics of Wealth and Poverty.* T. H. C. STEVENSON. It is suggested that the various conditions can best be met by inferring social position from occupation, and taking broad and simple lines of grading. This satisfies some important tests, necessary qualifications being noted. *Changes in Sex and Age Constitutions of some Representative European Populations.* S. DE JASTRZEBSKI.

Economica.

JUNE, 1928. *Theories of Banking Policy.* D. H. ROBERTSON. An elucidation of the writer's views on bank money and real values leads to an examination of alternative principles of banking policy—the Gold Standard, the principle of Productive Credit, and the principle of Price Stabilisation. *Wage-Fixing in the Building Industry.* J. R. HICKS.

The Economic Record (Melbourne).

MAY, 1928. *The Financial Relations of the Commonwealth and the States.* R. C. MILLS. *Labour Mobility in Australian Industry.* F. R. E. MAULDON. *New Zealand Infant Mortality and Still-Births.* M. FRASER. *Relative Significance of Primary and Secondary Production.* C. H. WICKENS. *The Economic Position of the Farmer in New Zealand.* H. BELSHAW. *Australian State Income-tax Schemes.* W. F. MURPHY. *The Law of Diminishing Returns in Agricultural Experiment.* J. A. PRESCOTT.

Indian Journal of Economics (Allahabad).

APRIL, 1928. *A Commission of Economists in Poland.* G. F. SHIRRAS. A review of the reports of the American financial experts. *Agrarian Unsettlement.* R. K. MUKERJEE. *Legislative Remedy for Subdivision of Holdings.* R. R. TALCHERKAR. *Co-operation and Education.* B. A. KHAN. *Co-operative Marketing.* D. SINGH.

JANUARY, 1928. *Conference Number. Papers read and discussed at the Eleventh Conference of the Indian Economic Association.* These papers deal mainly with agricultural questions, co-operation, credit, insurance, and technical developments.

Review of Economic Statistics (Harvard).

FEBRUARY, 1928. *The Money Market in* 1927. W. R. BURGESS. *A Survey of Post-War Levels of Business Activity.* A. R. ECKLER. *The Outlook for the Oil Industry.* J. E. POGUE. *The Copper.*

Industry in 1927. F. E. RICHTER. *The Measure of the General Price Level.* C. E. SNYDER. *Review of the year* 1927.

MAY, 1928. *The Theory of Economic Cycles based on the Tendency toward Excessive Capitalisation.* M. BOUNIATIAN. Gives a summary of the writer's theory of economic crises, with an indication of the statistical data which may serve for its verification. *The Effect of Correlation between Weights and Relatives in the Construction of Index-Numbers.* W. M. PERSONS. *Review of the first quarter of the year.*

Quarterly Journal of Economics.

MAY, 1928. *Issues in Economic Theory : an attempt to clarify.* P. T. HOMAN. A study in methodology. *Parity in the Exchange of Future Money and Future Commodities.* G. P. WATKINS. An investigation of the " downward bias of futures," or " tendency of futures to be below a price that would contain a minimum carrying charge difference " between spot and future prices. *Equilibrium in International Trade ; the United States,* 1919–26. J. W. ANGELL. A general analysis of the maintenance of equilibrium; the effects of import, export and the business cycle. Application to the U.S. in 1919–21 and 1921–4. *The Meaning and Use of a General Price Index.* G. HABERLER. The limitations of usefulness of a general index of prices, with reference to Snyder's results in particular. *The Advantages of Labour Turnover; an illustrative case.* A. BEZANSON. In addition to some net gain in earnings, in the cases considered, such other aspects arise as range of workers' experience, flexibility of labour supply, and vertical movement or " upgrading." *The Growth of English Shipping,* 1572–1922. A. P. USHER.

Journal of Political Economy (Chicago).

APRIL, 1928. *Membership in the Federal Reserve System.* C. S. TIPPETTS. The decline in membership does not mean a decline in strength, and will probably be arrested by the McFadden Act. *The Leighton Co-operative Industries.* P. S. TAYLOR. A study of a special case of employee-stockholding. *International Aspects of the European Coal Crisis.* M. EASTMAN. *One big Union in Canada.* H. A. LOGAN. *Automobile Mortality Table.* S. H. NERLOVE and W. J. GRAHAM.

JUNE, 1928. *British Trade Disputes and Trade Unions Act.* H. A. MILLS. *The Trend of Agricultural Exports.* E. G. NOURSE. *The General Theory of Price.* F. H. KNIGHT. *Theory of Location and General Economics.* A. PREDÖHL. A critical examination of Thünen and Weber, and suggestions for treating the problem of location as a special case of combination and substitution of factors. *Trade Custom in Lancashire Cotton Industry.* G. L. PALMER.

American Economic Review.

MARCH, 1928. (*Supplement.*) *Papers and Proceedings of the Fortieth Annual Meeting of the American Economic Association.* Includes " round-table discussions " on *Land Economics,* the *Status and Prospects of Quantitative Economics, Economic History.* Among a large number of individual papers may be specially mentioned those on the *Revision of the European Debt Settlement.*

JUNE, 1928. *Emergence of Free Labor Contract in England.* H. M. CASSIDY. *Measurement of Time Valuation.* J. G. SMITH. "An attempt to apply the method of induction to the time-preference theory of interest." *Minimum Wage Administration.* J. W. MACMILLAN. *Progress of Farm Relief.* J. D. BLACK.

Annals of the American Academy of Political and Social Science (Philadelphia).

MAY, 1928. *Standards in Industry.* This number deals with Standardisation in its general aspect, and in its relation to specific industries and problems. Among the more general sections in Part I are those on *Organised Effort in Simplification*, by the Assistant Director of the U.S. Bureau of Standards; on the *Economic Aspects of Standardisation*, by the Editor of the *American Machinist;* and on the *Effect on Labour of the New Standardisation Policy of American Industry*, by the President of the American Federation of Labour. Part II deals with specific industries, Part III with *Standardisation Programs outside of Industry*, Part IV with the consumer.

Wheat Studies (Stanford University, California).

MARCH, 1928. *Rye in its Relations to Wheat.* Before the war, the per capita disappearance of rye was about 360 lbs. in Germany and only 22 lbs. in the United States. Since the war disappearance in both countries has declined to about 245 lbs. in Germany and 17 lbs. in the United States.

MAY, 1928. *Survey of the Wheat Situation, December* 1927 *to March* 1928. Exports from Argentine and the Pacific coast of North America were exceptionally large, while very little wheat was exported from Atlantic and gulf ports of U.S. A record export movement may occur from Canada, where stocks on March 31 were the largest in history. Carry-overs bid fair to be as large as or larger than in 1926–27. The Northern Hemisphere will probably harvest less wheat this year than last.

JUNE, 1928. *The Objectives of Wheat Breeding.*

JULY, 1928. *British Parcels Prices.* Weekly averages of daily quoted prices of all sales of wheat parcels in the United Kingdom seem best to fulfil the requirements of a world wheat price useful for short-time analyses.

Revue d'Économie Politique.

MARCH–APRIL, 1928. *Les origines historiques des problèmes économiques actuels.* H. HAUSER. Differences of volume or of form should not prevent the recognition of similarity between present problems of organisation and their early counterparts. *La reforme douanière et le Parlement.* P. ELBEL. *Les indices des valeurs mobilières en France et en divers pays.* J. DESSIRIER. With important correlation statistics and diagrams. *L'influence américaine sur l'économie britannique d'après les banquiers anglais.* L. BAUDIN. *La vie économique: en Italie:* G. MORTARA; *en Angleterre:* H. POUYANNE.

Revue de l'Institut de Sociologie (Brussels).

JANUARY–MARCH, 1928. *L'Optimum de population et ses critères.* E. DUPREEL. A contribution, both critical and positive, to the theory of *optimum*, with reference to the recent history of population theory.

Journal des Économistes.

MAY, 1928. *Les variations du taux de l'escompte de* 1921 *à* 1928. P. CAUBOUE.

JUNE, 1928. *L'Allemagne depuis le début de l'inflation.* B. MOURRE. *La Chine économique.* R. J. PIERRE. *Les grandes compagnies de chemin de fer en* 1927. G. DE NOUVION.

Zeitschrift für die gesamte Staatswissenschaft (Tübingen).

Gegenwartsaufgaben der Nationalökonomie. A. AMONN. The writer defends his eclectic methods against Karl Diehl. *Zur Lehre vom Zwangs-sparen.* E. EGNER. On the relations between inflation and extension of capital. *Die Panamerikanische Rechtsentwicklung.* F. W. VON RAUCHHAUPT. Brings together the legislative results of the Pan-American Conference. *Probleme des wirtschaftlichen Denkens.* K. ENGLIS. A reply to the criticisms of R. Streller. *Die gleitende Produktivitätslohnskala.* H. LUFFT. A criticism of the new wage theory of the American Federation of Labour.

Vierteljahrshefte zur Konjunkturforschung (Berlin).

SONDERHEFT 8. *Der Stickstoffverbrauch der Landwirtschaft in den einzelnen Gebieten des Deutschen Reiches im Jahre* 1926–7. A. HANAU and H. PAETZMANN.

3 Jahrgang, Heft I. Teil A. *Die Konjunktur Ende Mai* 1928. Teil B. *Die Konjunktur einzelner Wirtschaftszweige.*

Jahrbücher für Nationalökonomie und Statistik (Jena).

FEBRUARY, 1928. *Die Wirtschaftstheorie bei Sombart.* T. SURANYI-UNGER. *Wandlungen in Wesen und Aufgaben der Sozialpolitik.* G. ALBRECHT. *Bemerkungen zur Theorie der Steuersystematik.* DR. F. GUTMANN analyses the theory of tax systems by reference to certain principles. The more important part of the analysis turns on the discussion of "productive power" and "taxable capacity." *Die wirtschaftliche Gesetzgebung des Deutschen Reiches.* J. MÜLLER. This article surveys the economic legislation in Germany from October to December, 1927. This mainly concerned slight modifications of existing laws—*e.g.* insurance of employees and maintenance allowances payable by the State.

APRIL, 1928. *Die Theorie des volkswirtschaftlichen Entwicklungsprozesses und ihre Fortbildung durch eine evolutionäre Konjunkturtheorie.* E. H. VOGEL. *Die Finansierung des Aufschwunges durch Mobilisierung alter und neuer Warenvorräte vermittels der regulären Geldschöpfung.* Dr. P. SCHULZ-KIESOW makes an interesting survey of the financing of trade revival on the assumption that inductive proofs as to the effect of conjuncture fluctuations on the extent of the creation of purchasing power are lacking. The increased credit creation of the Reichsbank in late years and its effect on the price level are demonstrated; but the real thesis

is that the regular creation of purchasing power renders possible a greater utilisation of mobile real capital. *Arbeitsgemeinschaft, Betriebsgemeinschaft, Werksgemeinschaft.* DR. ALBRECHT critically surveys these three ideals of the methods of linking employer and employee. The Arbeitsgemeinschaft implies that "Protection of the just interests of the worker is only possible if the employer himself is put in bonds which bind him." Dr. Bang's writings on this are discussed with relation to Arnhold's system of apprentice schools, and detailed criticisms are made.

MAY, 1928. *Aenderungen in den Daten der Wirtschaft.* R. STRIGL. An inquiry into the applicability of economic theory. *Die Theorie des volkswirtschaftlichen Entwicklungsprozess und ihre Fortbildung durch eine evolutionäre Konjunkturtheorie.* III u. IV Teil. E. H. VOGEL.

Archiv für Sozialwissenschaft und Sozialpolitik (Tübingen).

FEBRUARY, 1928. *Intermittent freie Güter.* E. F. HECKSCHER. *Bemerkungen zum Grundproblem der subjektivistischen Wertlehre.* PROFESSOR MISES makes a study of Subjective Value by means of an analysis of the views of Menger and Böhm-Bawerk. Although there are certain misconceptions in their views, they have nevertheless succeeded in explaining price formation subjectively. *Vom nächsten Krieg.* F. C. ENDRES. *Zur Phänomenologie der sozialen Erscheinung.* S. FRANK. *Das Agrarproblem der Vereinigten Staaten. II.* W. RÖPKE. *Wahl and Wertung.* J. NISSEN.

APRIL, 1928. "*Wert*" *öder* "*Wirtschaftliche Dimension*"*?* A. AMONN. *Der Kampf um die Leistungsfähigkeit der Verwaltung in den Vereinigten Staaten.* L. D. WHITE. *Ueber monopolistiche und nicht-monopolistiche.* DR. WOLFERS in a very clear and suggestive article discusses various types of monopoly on a theoretical basis, including the monopolistic powers of Kartels. *Wie kam die deutsche Ausbreitung nach Osten zum Stillstand?* M. JAFFE. *Reservearmee, Lohn und Krise im Imperialismus.* F. STERNBERG.

JUNE, 1928. *Oppenheimers Theorie der* "*Reinen und Politischen Oekonomie.*" I. *Grundlegung und allgemeine Preislehre.* A. AMONN. *Irrtümer einer Wirtschaftstheorie ohne statistische Grundlage.* P. S. FLORENCE. A paper read to the British Association, 1927. *Konflikte zwischen Vertragspflicht, Verbandspflicht, und Tarifpflicht.* H. POTTHOFF. *Zins, Kredit und Konjunktur.* J. BARACS.

Weltwirtschaftliches Archiv (Jena).

JULY, 1928. *Produktivität.* W. SOMBART. *Das intertemporale Gleichgewichtssystem der Preise und die Bewegungen des* "*Geldwertes.*" F. A. v. HAYEK. *Entwicklungsgeschichte der monetären Konjunkturtheorie.* F. BURCHARDT. *Über Cassels System der theoretischen Sozialökonomie.* K. DIEHL. *Die Ermittlung der Werterhöhung in der Produktionsstatistik.* J. P. GHERTSCHUK.

Schmollers Jahrbuch (Munich and Leipzig).

APRIL, 1928. *Idee und Wirklichkeit im Faszismus.* E. VON BECKERATH. *Methodik der Volkswirtschaftslehre.* DR. L. STEPHINGER gives a survey of the methods employed in Economics on the

basis of Amonn's, Weber's, and Spann's enumerations. After discussing the principle of Universalism he goes on to treat of Empirics, Teleology, etc. The final section is devoted to a summary of the value of the various methods. *Theorie des Ertrages.* F. OPPENHEIMER. *Die Beobachtungsverfahren der wirtschaftlichen Wechsellagen des Harvard University Committee on Economic Research.* H. STÄHLE. *Der Kampf um die Herrschaft über den Gefrier- und Kühlfleischmarkt.* J. JESSEN. An interesting comparative survey. *Reichsverfassung und Städtetag.* E. HORNEFFER.

Skandinaviska Kreditaktiebolaget (Stockholm).

APRIL, 1928. *Import of Capital and Inflation.* G. CASSEL. Examines the question whether large-scale foreign borrowing must tend to bring about an inflation in the borrowing country, and applies the reasoning to the present situation in Germany.

Giornale degli Economisti (Milan).

APRIL, 1928. The whole of this number is devoted to articles dealing with the technical methods adopted for, and the consequences of, the stabilisation of the lira. Attention may be drawn in particular to the speech of Count Volpi in the Senate on February 17, 1928, in support of the stabilisation Decrees, which is here printed *in extenso*: *La riforma monetaria illustrata dalla Ministro delli Finanze.* GIUSEPPE VOLPI. *Considerazioni techniche sopra il ritorno al bigliètto convertible.* GUSTAVO DEL VECCHIO. *La rivalutazione e la pubblica fincenza.* GINO BORGATTA. *La rivalutazione della lira come provvedimento di giustizia sociale ed i suoi limiti.* ANTONIO VLAM. It is contended that social justice over the whole community would not have been furthered by a return of the lira to its pre-war parity. The article is prefaced by an extract from a speech by Signor Mussolini delivered on December 21, 1927: "A further revaluation of the currency would be possible, but it is not desirable because, (*a*) as has happened in other countries, it would mainly be the product of international speculative operations; (*b*) it would either cause a very grave permanent crisis or periodic crises, not less serious in character, to the detriment of the national economy; (*c*) it would impose insupportable burdens upon the State and therefore upon its tax-paying citizens." *Prezzi all' ingrosso e rivalutazione della lira.* GUZLIELURO TAGLIACAME. From August, 1926, the point of maximum price rise, to January, 1928, the wholesale prices of imports fell by 34 per cent., the prices of exports by 28 per cent., and the prices of goods with mainly a national market by scarcely 26 per cent. In the same period prices of raw materials as a whole fell by 33 per cent., prices of semi-manufactured goods by 30 per cent., and finished goods by only 23 per cent. *La rivalutazione della lira, i prezzi alminuto ed i salari.* ALESSANDRO MOLINARI. As always in a period of deflation, retail prices and wages have lagged behind wholesale prices. Some interesting observations are made on the effectiveness of official measures for compelling retailers to lower the prices of their products. *La stabilizzazione e le banche e le altre società.* M. MAZZUCCHELLI. *La rivalutazione della lira e il commercio con l'estero.* GIORGIO MORTARA.

MAY, 1928. *Considerazioni sui "barometri" economici*, C. BRESCIANI-TURRONI. A continuation of the important article published in the January number of the *Giornale* criticising the methods of construction of indices of general business conditions, and the deductions that may be drawn from such indices. *La unificazione della monea cartacea in Inghilterra.* ATTILIO CABIATI. "The vital point of the problem consists in deciding whether the existing monetary equilibrium of England is stable; whether in fact it does not depend on a special technical banking situation, which has enabled hitherto the ailing national industries to continue to work under excessively high costs, which has managed to create vast foreign credits and, at the same time, to paralyse the effects on the commercial balance by a skilful system of compensation, by bounties to industries, by protective tariffs, by imperial preferences, by the contraction of wages reduced for some classes of workers below the earnings of similar workers abroad, and, finally, by a continual process of redistribution of wealth."

JUNE, 1928. *Inflazione e prezzi in Russia prima della riforma monetaria bolscevica.* J. GRIZIOTTI KRETSCHMANN. Index numbers of price movements and of circulation show (1) that prices increased in 1922 less rapidly than circulation under the influence of the improvement of economic conditions following on the N.E.P.; (2) that in the second half of 1923, on the other hand, the rise of prices was at a considerably faster rate than the increase of circulation; (3) that the discount on paper money in relation to gold was smaller than the decrease in the purchasing power of the ruble in terms of commodities on the domestic market; (4) that the inflation and the depreciation of the ruble did not affect the exportation of Russian commodities. *Media aritmetica e media geometrica nel calcolo dei numeri indici dei prezzi all' ingrosso.* G. TAGLICARNE. A plea for the adoption of the geometric in place of the arithmetic mean in the calculation of index numbers. A number of index numbers are cited for different countries in which widely different results are obtained according to the type of mean employed, and it is contended that the geometric mean normally gives much the more trustworthy result. *Sulla tussazione del risparmio.* RENZO FUBINI. An elaboration of the note published by the same author in the *Riforma Sociale* for March-April, 1928.

La Riforma Sociale (Turin).

MAY-JUNE, 1928. *Elementi soggettivi ed oggettivi nella formazione del risparmio.* G. SACERDOTE-IACHIA. *Inflazione e deflazione nei riflessi finanziari.* GIOVANNI CARANO-DONVITO. *L'industria italiana delle automobili e la protezione doganale.* EDOARDO GIRETTI. In 1927 33,132 motor-cars valued at 605,300,000 lire were exported from Italy, while imports amounted to 3832 cars valued at 48,700,000 lire. Ninety per cent. of the imports came from the United States and consisted mainly of the cheaper qualities of cars. Under the present tariff the duty on a Ford car amounts to 61·9 per cent. on its value at the Italian frontier. It is not, therefore, lack of sufficient protection which prevents the Italian motor industry from producing cheap cars at competitive prices. *Il cosidetto "Dollar Standard" e la politica monetaria del "Federal Reserve System."* ATTILIO CABIATI. An examination

of the trend of gold movements and of credit since the war shows that the Federal Reserve Board have by no means completely sterilised the new gold imported into the United States since 1920, but that it has in fact acted as the basis for an enormous expansion of credit. That this has been accomplished without a rise in prices does not affect the fact that the credit expansion has been dependent upon a great increase in gold supplies. The post-war autonomous credit and price policy of the Federal Reserve Board is threatened from two directions: the recent exodus of gold from the United States may make the maintenance of the present price level impossible; and so much gold may flow to other centres that the Board may cease to be in a position to act independently of the Central Banks in other countries. *Braccianti—Imponibile di mano d'opera e mezzadria.* PRIMO BANDI.

Metron (Rome).

MARCH, 1928. *La concentrazione della popolazione.* M. SAIBANTE. The main conclusions of this investigation into the concentration of population in different countries are: (1) in general the greater the density of population the smaller is its concentration in urban agglomerations; (2) the population of the various countries tends to be agglomerated in certain points the number of which varies inversely with their size in accordance with a constant relation, which can be proved mathematically, and this principle applies also to the population of the different regions within a country; (3) the degree of concentration of population in different countries depends largely upon economic and social factors; (4) there is a fairly high correlation between wealth and income per head and the degree of concentration of population.

Scientia (Bologna).

Il "Dumping" e i suoi effetti sul commercio internazionale. A. CUTRERA. Dumping is defined as a "sale below cost made in order to conquer a foreign market." In this sense dumping is much rarer than is commonly imagined. The damage done to the industry affected in the importing country may be partly compensated by the gain to the consumers of the dumped products. The consumers of the dumping country bear most of the burden at first, but they may benefit subsequently from the resulting expansion of the industry. Anti-dumping duties are useful if used with caution, but they may easily provoke reprisals and cause greater harm than that occasioned by the dumping practice. (June, 1928).

Revista Nacional de Economía (Madrid).

MARCH–APRIL, 1928. *Dinamismo de los Precios y Carestía de la Vida.* O. F. BAÑOS. This article, begun in the last issue, contains an elaborate statistical analysis of prices, currency circulation, reserves, discount rates and trade of the principal countries in the world between 1913 and 1927. The correlations between the different series are worked out. It is found that, for secular movement, there is no marked parallelism between the different factors, but, for movements of average duration, the correlations are significant but not perfect. The movement of prices cannot, therefore, be explained by any one alone of the factors, but, for the building up

of a realistic theory, changes in volume of the circulating medium constitute the best starting-point. Some recent refinements of the quantity theory of money are dealt with in detail. In beginning a discussion of the influences affecting cost of living the author discusses inflation and its indirect results. *Experiencía y fantasía en las aplicaciones del cálculo de probabilidades.* L. AMOROSO. "Theories and methods daily being applied under the name of actuarial mathematics in insurance offices may be laid down as a logical system independent of the concept of chance." A semi-philosophical discussion of the laws of chance. *El Crédito Agrícola.* G. MAÑUECO. Distinction made between agricultural credit and credit on land; the former being credit on the security of circulating capital, the latter on fixed capital. In dealing with land credit the relative advantages of raising credit on the security of land and selling land to obtain the necessary resources are compared. The conclusion is that, in Spain, the method of mortgage might usefully be more generally applied, though mortgages are expensive and particularly burdensome in unirrigated areas. The peculiar qualities of agricultural credit are discussed and criticism advanced against authorities quoted. In Spain agricultural credit is provided by three official bodies—the Banco Hipotecario, los Pósitos, el Servicio Nacional de Crediti Agricola. In addition agricultural syndicates and banks grant some credits. The history, methods of working and suggested improvements of the official bodies are described in detail. *El Monopolio de Petróleos.* S. DE ZARAGOZA. The sale of petrol and its derivatives has been leased, by the Spanish Government, to a distributing company. The author, combating certain criticisms of the scheme, asserts that, in this case, the fiscal monopoly has been devised for the good of the nation and not that of the company. He regards this scheme as preferable to many other existing monopolies, and believes that the close control which the State exercises under the petrol monopoly is an earnest of improved conditions in this branch of Government administration. *Condiciones esenciales para recobrar el mercado mundial.* S. MACHIN. *Interpretación de la ley del Timbre.* J. DE LANUZA. A discussion of the practical working of stamp duties in company and share transactions. *Misión a realizar.* J. M. SABAT. A plea for State encouragement of industry in Spain. The author believes that Spain lags behind other European countries only because her industries have lacked the fostering attentions of the Central Authority.

De Economist (Haarlem).

MAY, 1928. *Het Internationaal Arbeidsbureau.* R. A. FOCKEMA. An attack on the International Labour Office and Mr. Albert Thomas. The writer recalls the words of the *Journal des Débats* (Dec. 1, 1918) approving of international agreements, "en prenant les précautions nécessaires pour ne soumettre à ce régime que les matières et les pays qui comportent une telle conformité." This warning has not been observed. Decisions are frequently due to the representatives of States which are in no wise interested in the subject under discussion. Promises have been held out which are incapable of fulfilment, and non-compliance is then attributed to the bad faith of Governments or of the capitalists. It is unfortunate that the

task of the I.L.O. is limited to the "interests of the workers"; these are interwoven with the whole social life. The impression is created that the interests of the workers are something apart, opposed to a hostile power. Mr. Albert Thomas is a theoretician, with preconceived ideas; he shuts his eyes to reality. He has been and still is the advocate of a complete social revolution, and his actions are directed to this end. The questions of Unemployment Insurance and the Eight-hours Day are examined at some length. In summary the I.L.O. is an institution for the international propagation of Socialism. It preaches, for the present time, the abolition of personal responsibility in economic life, and that the State is ultimately responsible for everything; its Socialism is that of the class struggle. *De Amsterdamsche Wisselbank in de zeventiende eeuw II.* J. G. VAN DILLEN. Continues the history of the Bank of Amsterdam up to 1683; analyses the sources of the Bank's profits.

JUNE, 1928. *Het beleggingsvraagstuk voor de Rijksfondsen en de voorstellen der Commissie van Gijn.* J. J. KORNDORFFER. A discussion of the Report of the van Gijn Commission on the question of the simplification of administration of State funds (social insurance and pensions), especially with regard to investment. (See ECONOMIC JOURNAL, June 1928, p. 340.) *Vergelijkend overzicht van de immigratie en blijvende vestiging van Javanen en Britsch-Indiers in Suriname.* J. W. BURGER. A comparison of the immigration of Javanese and British Indians into Dutch Guiana. The question of immigration became urgent in 1863 with the abolition of slavery. The first agreement for the recruitment of British Indians was effected in 1870; recruitment in British India was finally forbidden in 1918. The characteristics of the two types of immigrants, their suitability for the work of permanent colonisation after the expiry of their period of indentured service and other aspects of the question are discussed in detail.

International Labour Review.

MAY, 1928. *The Measurement of Risk in connection with Labour Statistics.* J. W. NIXON. More precise definition is given of the two "rates" involved—the frequency rate and the severity rate—in different kinds of labour risk. *The Growth of the Corporation in Italy.* U. AILLAUD. *Seasonal Fluctuations in Migration.* L. VARLEZ. *Wage Changes in Great Britain*, 1922–27.

JUNE, 1928. *Rationalisation and Unemployment.* H. FUSS. Examination of various kinds of rationalisation leads to the conclusion that only to a modified extent do they create unemployment. The instances of Germany and America do not show any causal relation. There is enough continuous risk to justify the policy of social insurance; and rationalisation itself should be applied to some fundamental causes of unemployment. *The Handicraftsman and Modern Industry.* H. RABINOWITCH. An important contribution, showing the persistence of handicraft, in many cases even assisted by large-scale developments. An examination is made of the special problems—such as training and sharing in social legislation—of the "populous and hybrid world" of handicraftsmen. *An Inquiry into Working Conditions in Coal Mines.* F. MAURETTE.

NEW BOOKS.

British.

ARNDT (E. H. D.). Banking and Currency Development in South Africa (1652–1927); with an appendix on the rise of savings banking in South Africa. Cape Town: Juta & Co. 8¼″. Pp. 542. 25*s.*

BANERJEA (P.). Indian Finance in the Days of the Company. Macmillan. 8½″. Pp. 392. 12*s.* 6*d.*

BEVERIDGE (W. H.). British Food Control. H. Milford. 9¾″. Pp. xx + 446. 17*s.* 6*d.* (Economic and Social History of the World War, British Series.)

BOWLEY (A. L.). F. Y. Edgeworth's Contributions to Mathematical Statistics. Royal Statistical Society. 8½″. Pp. 139. 5*s.*

BOWLEY (A. L.). Official Statistics: what they contain and how to use them. Second edition. H. Milford. 7″. Pp. 72. 2*s.* 6*d.*

BRADY (A.). William Huskisson and Liberal Reform. An essay on the change in economic policy in the twenties of the nineteenth century. Oxford Univ. Press. 9″. Pp. 177. 12*s.* 6*d.*

CROFTON (R. H.). Statistics of the Zanzibar Protectorate, 1893–1927. Zanzibar. 10″. Pp. 24.

DEFOE (DANIEL). A Plan of the English Commerce. Being a compleat prospect of the trade of this nation, as well the home trade as the foreign. . . . Oxford. B. Blackwell. 7¼″. Pp. xix + 277. 6*s.*

FAY (C. R.). Two Empires. Cambridge: Bowes & Bowes. 8½″. Pp. 24. 6*d.*

FAY (C. R.). Great Britain from Adam Smith to the Present Day. An economic and social survey. Longmans. 8½″. Pp. 458. 12*s.* 6*d.*

GORDON (A. P. L.). The Problem of Trust and Monopoly Control. Routledge. 7½″. Pp. 186. 5*s.*

HARROP (A. J.). The Amazing Career of Edward Gibbon Wakefield. With extracts from "A Letter from Sydney" (1829). Allen & Unwin. 7½″. Pp. 253. 7*s.* 6*d.*

HERENDI (L.). A Complete Dictionary of Banking Terms in three Languages (English–German–French), with alphabetic system in each of these languages. Pitman. 9½″. Pp. 146 + 239 + 154. 21*s.*

HUMPHREY (A. W.). The Modern Case for Socialism. Allen & Unwin. 8½″. Pp. 272. 12*s.* 6*d.*

KANN (E.). The Currencies of China. An investigation of silver and gold transactions affecting China, with a section on copper. Second edition, revised. P. S. King. 9¾″. Pp. xxxiv + 562. 30*s.*

[Reviewed in our issue of September 1926.]

KEPPEL (A. J. W.). The Theory of the Cost-price System. With an introduction by J. A. Hobson. Allen & Unwin. 7″. Pp. 188. 6*s.*

KINLOCH (T. F.). Six English Economists. Gee & Co. 8½″. Pp. 76. 5*s.*

MUNRO (N.). The History of the Royal Bank of Scotland, 1727–1927. Edinburgh. Privately Printed by R. & R. Clark, Ltd. 8¾″. Pp. 417.

RAYNES (J. R.). Coal and its Conflicts. A brief record of the disputes between capital and labour in the coal-mining industry of Great Britain. E. Benn. 9¾″. Pp. 342. 21*s*.

ROBERTSON (J. M.). The Political Economy of Free Trade. P. S. King. 8½″. Pp. 190. 8*s*. 6*d*.

SHAW (BERNARD). The Intelligent Woman's Guide to Socialism. Constable. Pp. 495. 15*s*.

SHIELDS (B. F.). The Evolution of Industrial Organisation. Pitman. 8¼″. Pp. 296. 10*s*. 6*d*.

SPALDING (W. F.). Dictionary of the World's Currencies and Foreign Exchanges. Pitman. 9½″. Pp. 190. 30*s*.

SPICER (R. S.). British Engineering Wages. Arnold. 8½″. Pp. 159. 10*s*. 6*d*.

VALK (W. L.). The Principles of Wages. P. S. King. 8¾″. Pp. 139. 8*s*. 6*d*.

ZIMMERN (A.). Learning and Leadership. A study of the needs and the possibilities of international intellectual co-operation. Oxford Univ. Press. 8¼″. Pp. 111. 5*s*.

American.

ALSBERG (C. L.) and TAYLOR (A. E.). The Fats and Oils: a general view. Food Research Institute, Stanford University, California. 8¾″. Pp. 103.

["A simple, elementary, and non-technical exposition of the production, the technology, and the inter-relations of the various fats and oils," to show the influence of these products on agriculture and industry.]

AMERICAN FEDERATION OF LABOR. Wages, and Labor's Share in the Value added by Manufacture. Washington. 7″. Pp. 224. 50 cents.

BENNETT (MERRILL K.). Farm Cost Studies in the United States. Food Research Institute, Stanford University, California. 8¾″. Pp. 289.

BUELL (R. L.). The Native Problem in Africa. Macmillan. 9½″. 2 vols.

BURGESS (W. R.). The Reserve Banks and the Money Market. With an introduction by Benjamin Strong, Governor of the Federal Reserve Bank of New York. Harper & Brothers. 8″. Pp. xxiii + 328. 12*s*. 6*d*.

BYE (R. T.) and HEWETT (W. W.). Applied Economics. The application of economic principles to the problems of economic life. New York: A. Knopf. 9¼″. Pp. 655. 25*s*.

CONDLIFFE (J. B.). (Ed.). Problems of the Pacific. Proceedings of the Second Conference of the Institute of Pacific Relations, Honolulu, Hawaii, July 15 to 29, 1927. University of Chicago Press, 9½″. Pp. 630. $3.

DEXTER (P.) and SEDGWICK (J. H.). The War Debts. An American view. Macmillan. 7½″. Pp. 173. 6*s*. 6*d*.

FISHER (H. H.). America and the new Poland. Macmillan. 8½″. Pp. 403. 15*s*.

HAMILTON (H. W.) and WRIGHT (H. R.). A way of Order for Bituminous Coal. New York. (London, Allen and Unwin.) 7½". Pp. 365. 10*s*.

PATTON (H. S.). Grain Growers' Co-operation in Western Canada. Harvard University Press. (London, H. Milford.) 8¾". Pp. 471. 23*s*. (Harvard Economic Studies, 32.)

PATTERSON (E. M.). Tests of a Foreign Government Bond. New York: Payson & Clarke. 9". Pp. 224. $2.50.

ROSS (E. A.). Standing Room Only? New York: Century Co. 1927. 8". Pp. 368. $3.

SELTZER (L. H.). A Financial History of the American Automobile Industry. A study of the ways in which the leading American producers of automobiles have met their capital requirements. Houghton Mifflin Co. 8". Pp. 297. $3

SNODGRASS (K.). Copra and Cocoanut Oil. California, Food Research Institute. Stanford University. 8½". Pp. 135.

"A comprehensive study of a commodity that was 'discovered' only during the war, and has since become of great importance in American usage."

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TUGWELL (R. G.). Industry's Coming of Age. New York: Harcourt, Brace & Co. Pp. 274.

French.

AFTALION (A.). Cours de Statistique. Paris: Les Presses Universitaires de France. 10". Pp. 319. 40*fr*.

BARATIER (P.). L'autonomie syndicale et ses limites devant les cours anglaises. Paris: Giard. 9". Pp. 315. 40 *fr*.

BOISSONNADE (P.). Le Socialisme d'État, l'industrie, et les classes industrielles en France pendant les deux premiers Siècles de l'Ère Moderne (1453-1661). Paris: Libr. Ancienne Honoré Champion. 1927. 10". Pp. 380. 60 *fr*.

BOUSQUET (G. H.). Vilfredo Pareto, sa vie et son œuvre. Paris: Payot. 9". Pp. 230. 20 *fr*.

BURGESS (E. W.). La "Nonpartisan League." Une expérience américaine de socialisme d'état agraire. Paris: Giard. 9". Pp. 244. 28 *fr*.

KEYNES (J. M.). Réflexions sur le Franc et sur quelques autres sujets. Paris: Kra. Pp. 182.

[A Collection of reprinted articles, etc.]

LACHAPELLE (G.). Les batailles du franc. La trésorerie, le change et la monnaie depuis 1914. Paris: Alcan. 9". Pp. xv + 259. 30 *fr*.

NITTI (F.). Principes de science des finances. Traduits de l'Italien par Stefan Freund. Édition française sur la cinquième édition italienne. Paris: Giard. 9". 2 vols. 100 *fr*.

TEILHAC (E.). Histoire de la pensée économique aux États-Unis au dix-neuvième siècle. Paris: Sirey. 9". Pp. 194.

VIALLATE (A.). Le Monde économique 1918–27. Paris : Rivière. 9″. Pp. 258. 30 *fr.*

ZAGORSKY (S.). Où va la Russie ? (Vers le socialisme ou vers le capitalisme ?) Paris. 7½″. Pp. 338. 10 *fr.*

German.

BONN (M. J.). Befreiungspolitik oder Beleihungspolitik. Berlin : S. Fischer. 8″. Pp. 141.

DEUTSCH (P.). Konjunktur und Unternehmung. Berlin : R. Hobbing. 9″. Pp. 230. 12 *m.*

DOMSCHKE (M.). Der Gebührenbegriff. Leipzig : Akademische Verlagsgesellschaft. 9″. Pp. 58. 4.80 *m.*

FISCHER (C. A.). Das Derisentermingschäft in seinen Beziehungen zur Währung und Wirtschaft. Berlin : Springer. Pp. vii + 100.

[A study of the theory and practice of the forward market in the foreign exchanges.]

GELESNOFF (W.). Grundzüge der Volkswirtschaftslehre. Zweite Neubearbeitete Auflage. Leipzig : Teubner. 9″. Pp. 561.

HAHN (L. A.). Aufgaben und Grenzen der Währungspolitik. Jena : Fischer. 9½″. Pp. 61.

HANTOS (E.). Die Weltwirtschafts-Konferenz : Probleme und Ergebnisse. Leipzig : Gloeckner. 1928. 9¼″. Pp. 205. 11 *m.*

PANTLEN (H.). Der Wiedereintritt Deutschlands in die Weltschiff-fahrt. Berlin : de Gruyter & Co. 9¼″. Pp. 84. 4 *m.*

SALIN (E.). Theorie und Praxis staatlicher Kreditpolitik der Gegenwart. Tübingen : J. C. B. Mohr. 9″. Pp. 26. 1.80 *m.*

Greek.

'ΑΝΔΡΕΑΔΟΥ (Α. Μ.). Ἱστορία τῆς Ἑλληνικῆς δημοσίας οἰκονομίας. Τόμος α΄. Ἀπὸ τῶν ἡρωικῶν μέχρι τῶν Ἑλληνο-Μακεδονικῶν χρόνων. Athens. 1928. Pp. 563.

Italian.

CAMPESE (E.). I caratteri della disoccupazione operaia in Italia. Roma : Littorio. 10 *lire.*

DEMARIA (G.). Le teorie monetarie e il ritorno all' oro. Torino : Bocca. Pp. 245. 30 *lire.*

FOSSATI (E.). La sorgente del salario nel suo svolgimento dottrinale. Pavia : Treves. Pp. 81. 10 *lire.*

PRATO (G.). L'impiego dei capitali. Torino : Unione Tipografico. Pp. 382. 20 *lire.*

THE ECONOMIC JOURNAL

DECEMBER, 1928

INCREASING RETURNS AND ECONOMIC PROGRESS [1]

MY subject may appear alarmingly formidable, but I did not intend it to be so. The words economic progress, taken by themselves, would suggest the pursuit of some philosophy of history, of some way of appraising the results of past and possible future changes in forms of economic organisation and modes of economic activities. But as I have used them, joined to the other half of my title, they are meant merely to dispel apprehensions, by suggesting that I do not propose to discuss any of those alluring but highly technical questions relating to the precise way in which some sort of equilibrium of supply and demand is achieved in the market for the products of industries which can increase their output without increasing their costs proportionately, or to the possible advantages of fostering the development of such industries while putting a handicap upon industries whose output can be increased only at the expense of a more than proportionate increase of costs. I suspect, indeed, that the apparatus which economists have built up for dealing effectively with the range of questions to which I have just referred may stand in the way of a clear view of the more general or elementary aspects of the phenomena of increasing returns, such as I wish to comment upon in this paper.

Consider, for example, Alfred Marshall's fruitful distinction between the internal productive economies which a particular firm is able to secure as the growth of the market permits it to enlarge the scale of its operations and the economies external to the individual firm which show themselves only in changes of the organisation of the industry as a whole. This distinction has been useful in at least two different ways. In the first place it is, or ought to be, a safeguard against the common error of assuming that wherever increasing returns operate there is necessarily an effective tendency towards monopoly. In the second

[1] Presidential Address before Section F (Economic Science and Statistics) of the British Association for the Advancement of Science, Glasgow, September 10, 1928.

place it simplifies the analysis of the manner in which the prices of commodities produced under conditions of increasing returns are determined. A representative firm within the industry, maintaining its own identity and devoting itself to a given range of activities, is made to be the vehicle or medium through which the economies achieved by the industry as a whole are transmitted to the market and have their effect upon the price of the product.

The view of the nature of the processes of industrial progress which is implied in the distinction between internal and external economies is necessarily a partial view. Certain aspects of those processes are illuminated, while, for that very reason, certain other aspects, important in relation to other problems, are obscured. This will be clear, I think, if we observe that, although the internal economies of some firms producing, let us say, materials or appliances may figure as the external economies of other firms, not all of the economies which are properly to be called external can be accounted for by adding up the internal economies of all the separate firms. When we look at the internal economies of a particular firm we envisage a condition of comparative stability. Year after year the firm, like its competitors, is manufacturing a particular product or group of products, or is confining itself to certain definite stages in the work of forwarding the products towards their final form. Its operations change in the sense that they are progressively adapted to an increasing output, but they are kept within definitely circumscribed bounds. Out beyond, in that obscurer field from which it derives its external economies, changes of another order are occurring. New products are appearing, firms are assuming new tasks, and new industries are coming into being. In short, change in this external field is qualitative as well as quantitative. No analysis of the forces making for economic equilibrium, forces which we might say are tangential at any moment of time, will serve to illumine this field, for movements away from equilibrium, departures from previous trends, are characteristic of it. Not much is to be gained by probing into it to see how increasing returns show themselves in the costs of individual firms and in the prices at which they offer their products.

Instead, we have to go back to a simpler and more inclusive view, such as some of the older economists took when they contrasted the increasing returns which they thought were characteristic of manufacturing industry taken as a whole with the diminishing returns which they thought were dominant in agriculture because of an increasingly unfavourable proportioning

of labour and land. Most of them were disappointingly vague with respect to the origins and the precise nature of the "improvements" which they counted upon to retard somewhat the operation of the tendency towards diminishing returns in agriculture and to secure a progressively more effective use of labour in manufactures. Their opinions appear to have rested partly upon an empirical generalisation. Improvements had been made, they were still being made, and it might be assumed that they would continue to be made. If they had looked back they would have seen that there were centuries during which there were few significant changes in either agricultural or industrial methods. But they were living in an age when men had turned their faces in a new direction and when economic progress was not only consciously sought but seemed in some way to grow out of the nature of things. Improvements, then, were not something to be explained. They were natural phenomena, like the precession of the equinoxes.

There were certain important exceptions, however, to this incurious attitude towards what might seem to be one of the most important of all economic problems. Senior's positive doctrine is well known, and there were others who made note of the circumstance that with the growth of population and of markets new opportunities for the division of labour appear and new advantages attach to it. In this way, and in this way only, were the generally commonplace things which they said about "improvements" related to anything which could properly be called a doctrine of increasing returns. They added nothing to Adam Smith's famous theorem that the division of labour depends upon the extent of the market. That theorem, I have always thought, is one of the most illuminating and fruitful generalisations which can be found anywhere in the whole literature of economics. In fact, as I am bound to confess, I am taking it as the text of this paper, in much the way that some minor composer borrows a theme from one of the masters and adds certain developments or variations of his own. To-day, of course, we mean by the division of labour something much broader in scope than that splitting up of occupations and development of specialised crafts which Adam Smith mostly had in mind. No one, so far as I know, has tried to enumerate all of the different aspects of the division of labour, and I do not propose to undertake that task. I shall deal with two related aspects only: the growth of indirect or roundabout methods of production and the division of labour among industries.

It is generally agreed that Adam Smith, when he suggested that the division of labour leads to inventions because workmen engaged in specialised routine operations come to see better ways of accomplishing the same results, missed the main point. The important thing, of course, is that with the division of labour a group of complex processes is transformed into a succession of simpler processes, some of which, at least, lend themselves to the use of machinery. In the use of machinery and the adoption of indirect processes there is a further division of labour, the economies of which are again limited by the extent of the market. It would be wasteful to make a hammer to drive a single nail; it would be better to use whatever awkward implement lies conveniently at hand. It would be wasteful to furnish a factory with an elaborate equipment of specially constructed jigs, gauges, lathes, drills, presses and conveyors to build a hundred automobiles; it would be better to rely mostly upon tools and machines of standard types, so as to make a relatively larger use of directly-applied and a relatively smaller use of indirectly-applied labour. Mr. Ford's methods would be absurdly uneconomical if his output were very small, and would be unprofitable even if his output were what many other manufacturers of automobiles would call large.

Then, of course, there are economies of what might be called a secondary order. How far it pays to go in equipping factories with special appliances for making hammers or for constructing specialised machinery for use in making different parts of automobiles depends again upon how many nails are to be driven and how many automobiles can be sold. In some instances, I suppose, these secondary economies, though real, have only a secondary importance. The derived demands for many types of specialised production appliances are inelastic over a fairly large range. If the benefits and the costs of using such appliances are spread over a relatively large volume of final products, their technical effectiveness is a larger factor in determining whether it is profitable to use them than any difference which producing them on a large or a small scale would commonly make in their costs. In other instances the demand for productive appliances is more elastic, and beyond a certain level of costs demand may fail completely. In such circumstances secondary economies may become highly important.

Doubtless, much of what I have said has been familiar and even elementary. I shall venture, nevertheless, to put further stress upon two points, which may be among those which have

a familiar ring, but which appear sometimes to be in danger of being forgotten. (Otherwise, economists of standing could not have suggested that increasing returns may be altogether illusory, or have maintained that where they are present they must lead to monopoly.) The first point is that the principal economies which manifest themselves in increasing returns are the economies of capitalistic or roundabout methods of production. These economies, again, are largely identical with the economies of the division of labour in its most important modern forms. In fact, these economies lie under our eyes, but we may miss them if we try to make of *large-scale* production (in the sense of production by large firms or large industries), as contrasted with *large* production, any more than an incident in the general process by which increasing returns are secured and if accordingly we look too much at the individual firm or even, as I shall suggest presently, at the individual industry.

The second point is that the economies of roundabout methods, even more than the economies of other forms of the division of labour, depend upon the extent of the market—and that, of course, is why we discuss them under the head of increasing returns. It would hardly be necessary to stress this point, if it were not that the economies of large-scale operations and of "mass-production" are often referred to as though they could be had for the taking, by means of a "rational" reorganisation of industry. Now I grant that at any given time routine and inertia play a very large part in the organisation and conduct of industrial operations. Real leadership is no more common in industrial than in other pursuits. New catch-words or slogans like mass-production and rationalisation may operate as stimuli; they may rouse men from routine and lead them to scrutinise again the organisation and processes of industry and to try to discover particular ways in which they can be bettered. For example, no one can doubt that there are genuine economies to be achieved in the way of "simplification and standardisation," or that the securing of these economies requires that certain deeply rooted competitive wastes be extirpated. This last requires a definite concerted effort—precisely the kind of thing which ordinary competitive motives are often powerless to effect, but which might come more easily as the response to the dissemination of a new idea.

There is a danger, however, that we shall expect too much from these "rational" industrial reforms. Pressed beyond a certain point they become the reverse of rational. I have

naturally been interested in British opinions respecting the reasons for the relatively high productivity (per labourer or per hour of labour) of representative American industries. The error of those who suggest that the explanation is to be found in the relatively high wages which prevail in America is not that they confuse cause and effect, but that they hold that what are really only two aspects of a single situation are, the one cause, and the other effect. Those who hold that American industry is managed better, that its leaders study its problems more intelligently and plan more courageously and more wisely can cite no facts in support of their opinion save the differences in the results achieved. Allowing for the circumstance that British industry, as a whole, has proved to be rather badly adjusted to the new post-war economic situation, I know of no facts which prove or even indicate that British industry, seen against the background of its own problems and its own possibilities, is less efficiently organised or less ably directed than American industry or the industry of any other country.

Sometimes the fact that the average American labourer works with the help of a larger supply of power-driven labour-saving machinery than the labourer of other countries is cited as evidence of the superior intelligence of the average American employer. But this will not do, for, as every economist knows, the greater the degree in which labour is productive or scarce—the words have the same meaning—the greater is the relative economy of using it in such indirect or roundabout ways as are technically advantageous, even though such procedure calls for larger advances of capital than simpler methods do.

It is encouraging to find that a fairly large number of commentators upon the volume of the American industrial product and the scale of American industrial organisation have come to surmise that the extent of the American domestic market, unimpeded by tariff barriers, may have something to do with the matter. This opinion seems even to be forced upon thoughtful observers by the general character of the facts, whether or no the observers think in terms of the economists' conception of increasing returns. In certain industries, although by no means in all, productive methods are economical and profitable in America which would not be profitable elsewhere. The importance of coal and iron and other natural resources needs no comment. Taking a country's economic endowment as given, however, the most important single factor in determining the effectiveness of its industry appears to be the size of the market. But

just what constitutes a large market? Not area or population alone, but buying power, the capacity to absorb a large annual output of goods. This trite observation, however, at once suggests another equally trite, namely, that capacity to buy depends upon capacity to produce. In an inclusive view, considering the market not as an outlet for the products of a particular industry, and therefore external to that industry, but as the outlet for goods in general, the size of the market is determined and defined by the volume of production. If this statement needs any qualification, it is that the conception of a market in this inclusive sense—an aggregate of productive activities, tied together by trade—carries with it the notion that there must be some sort of balance, that different productive activities must be proportioned one to another.

Modified, then, in the light of this broader conception of the market, Adam Smith's dictum amounts to the theorem that the division of labour depends in large part upon the division of labour. This is more than mere tautology. It means, if I read its significance rightly, that the counter forces which are continually defeating the forces which make for economic equilibrium are more pervasive and more deeply rooted in the constitution of the modern economic system than we commonly realise. Not only new or adventitious elements, coming in from the outside, but elements which are permanent characteristics of the ways in which goods are produced make continuously for change. Every important advance in the organisation of production, regardless of whether it is based upon anything which, in a narrow or technical sense, would be called a new "invention," or involves a fresh application of the fruits of scientific progress to industry, alters the conditions of industrial activity and initiates responses elsewhere in the industrial structure which in turn have a further unsettling effect. Thus change becomes progressive and propagates itself in a cumulative way.

The apparatus which economists have built up for the analysis of supply and demand in their relations to prices does not seem to be particularly helpful for the purposes of an inquiry into these broader aspects of increasing returns. In fact, as I have already suggested, reliance upon it may divert attention to incidental or partial aspects of a process which ought to be seen as a whole. If, nevertheless, one insists upon seeing just how far one can get into the problem by using the formulas of supply and demand, the simplest way, I suppose, is to begin by inquiring into the operations of reciprocal demand when the commodities exchanged

are produced competitively under conditions of increasing returns and when the demand for each commodity is elastic, in the special sense that a small increase in its supply will be attended by an increase in the amounts of other commodities which can be had in exchange for it.[1] Under such conditions an increase in the supply of one commodity *is* an increase in the demand for other commodities, and it must be supposed that every increase in demand will evoke an increase in supply. The rate at which any one industry grows is conditioned by the rate at which other industries grow, but since the elasticities of demand and of supply will differ for different products, some industries will grow faster than others. Even with a stationary population and in the absence of new discoveries [2] in pure or applied science there are no limits to the process of expansion except the limits beyond which demand is not elastic and returns do not increase.

If, under these hypothetical conditions, progress were unimpeded and frictionless, if it were not dependent in part upon a process of trial and error, if the organisation of industry were always such as, in relation to the immediate situation, is most economical, the realising of increasing returns might be progressive and continuous, although, for technical reasons, it could not always proceed at an even rate. But it would remain a process requiring time. An industrial dictator, with foresight and knowledge, could hasten the pace somewhat, but he could not achieve an Aladdin-like transformation of a country's industry, so as to reap the fruits of a half-century's ordinary progress in a few years. The obstacles are of two sorts. First, the human material which has to be used is resistant to change. New trades have to be learnt and new habits have to be acquired. There has to be a new geographical distribution of the population and established communal groups have to be broken up. Second, the accumulation of the necessary capital takes time, even though the process of accumulation is largely one of turning part of an increasing product into forms which will serve in securing a further increase of product. An acceleration of the rate of accumulation encounters increasing costs, into which both technical and psychological elements enter. One who likes

[1] If the circumstance that commodity *a* is produced under conditions of increasing returns is taken into account as a factor in the elasticity of demand for *b* in terms of *a*, elasticity of demand and elasticity of supply may be looked upon as different ways of expressing a single functional relation.

[2] As contrasted with such new ways of organising production and such new "inventions" as are merely adaptations of known ways of doing things, made practicable and economical by an enlarged scale of production.

to conceive of all economic processes in terms of tendencies towards an equilibrium might even maintain that increasing returns, so far as they depend upon the economies of indirect methods of production and the size of the market, are offset and negated by their costs, and that under such simplified conditions as I have dealt with the realising of increasing returns would be spread through time in such a way as to secure an equilibrium of costs and advantages. This would amount to saying that no real economic progress could come through the operation of forces engendered *within* the economic system—a conclusion repugnant to common sense. To deal with this point thoroughly would take us too far afield. I shall merely observe, first, that the appropriate conception is that of a *moving* equilibrium, and second, that the costs which (under increasing returns) grow less rapidly than the product are not the "costs" which figure in an "equilibrium of costs and advantages."

Moving away from these abstract considerations, so as to get closer to the complications of the real situation, account has to be taken, first, of various kinds of obstacles. The demand for some products is inelastic, or, with an increasing supply, soon becomes so. The producers of such commodities, however, often share in the advantages of the increase of the general scale of production in related industries, and so far as they do productive resources are released for other uses. Then there are natural scarcities, limitations or inelasticities of supply, such as effectively block the way to the securing of any important economies in the production of some commodities and which impair the effectiveness of the economies secured in the production of other commodities. In most fields, moreover, progress is not and cannot be continuous. The next important step forward is often initially costly, and cannot be taken until a certain quantum of prospective advantages has accumulated.

On the other side of the account are various factors which reinforce the influences which make for increasing returns. The discovery of new natural resources and of new uses for them and the growth of scientific knowledge are probably the most potent of such factors. The causal connections between the growth of industry and the progress of science run in both directions, but on which side the preponderant influence lies no one can say. At any rate, out of better knowledge of the materials and forces upon which men can lay their hands there come both new ways of producing familiar commodities and new products, and these last have a presumptive claim to be regarded as em-

bodying more economical uses of productive resources than the uses which they displace. Some weight has to be given also to the way in which, with the advance of the scientific spirit, a new kind of interest—which might be described as a scientific interest conditioned by an economic interest—is beginning to infiltrate into industry. It is a point of controversy, but I venture to maintain that under most circumstances, though not in all, the growth of population still has to be counted a factor making for a larger *per capita* product—although even that cautious statement needs to be interpreted and qualified. But just as there may be population growth with no increase of the average *per capita* product, so also, as I have tried to suggest, markets may grow and increasing returns may be secured while the population remains stationary.

It is dangerous to assign to any single factor the leading rôle in that continuing economic revolution which has taken the modern world so far away from the world of a few hundred years ago. But is there any other factor which has a better claim to that rôle than the persisting search for markets? No other hypothesis so well unites economic history and economic theory. The Industrial Revolution of the eighteenth century has come to be generally regarded, not as a cataclysm brought about by certain inspired improvements in industrial technique, but as a series of changes related in an orderly way to prior changes in industrial organisation and to the enlargement of markets. It is sometimes said, however, that while in the Middle Ages and in the early modern period industry was the servant of commerce, since the rise of "industrial capitalism" the relation has been reversed, commerce being now merely an agent of industry. If this means that the finding of markets is one of the tasks of modern industry it is true. If it means that industry imposes its will upon the market, that whereas formerly the things which were produced were the things which could be sold, now the things which have to be sold are the things that are produced, it is not true.

The great change, I imagine, is in the new importance which the *potential market* has in the planning and management of large industries. The difference between the cost per unit of output in an industry or in an individual plant properly adapted to a given volume of output and in an industry or plant equally well adapted to an output five times as large is often much greater than one would infer from looking merely at the economies which may accrue as an existing establishment gradually extends the

scale of its operations. Potential demand, then, in the planning of industrial undertakings, has to be balanced against potential economics, elasticity of demand against decreasing costs. The search for markets is not a matter of disposing of a "surplus product," in the Marxian sense, but of finding an outlet for a potential product. Nor is it wholly a matter of multiplying profits by multiplying sales; it is partly a matter of augmenting profits by reducing costs.

Although the initial displacement may be considerable and the repercussions upon particular industries unfavourable, the enlarging of the market for any one commodity, produced under conditions of increasing returns, generally has the net effect, as I have tried to show, of enlarging the market for other commodities. The business man's mercantilistic emphasis upon markets may have a sounder basis than the economist who thinks mostly in terms of economic statics is prone to admit. How far "selling expenses," for example, are to be counted sheer economic waste depends upon their effects upon the aggregate product of industry, as distinguished from their effects upon the fortunes of particular undertakings.

Increasing returns are often spoken of as though they were attached always to the growth of "industries," and I have not tried to avoid that way of speaking of them, although I think that it may be a misleading way. The point which I have in mind is something more than a quibble about the proper definition of an industry, for it involves a particular thesis with respect to the way in which increasing returns are reflected in changes in the organisation of industrial activities. Much has been said about industrial integration as a concomitant or a natural result of an increasing industrial output. It obviously is, under particular conditions, though I know of no satisfactory statement of just what those particular conditions are. But the opposed process, industrial differentiation, has been and remains the type of change characteristically associated with the growth of production. Notable as has been the increase in the complexity of the apparatus of living, as shown by the increase in the variety of goods offered in consumers' markets, the increase in the diversification of intermediate products and of industries manufacturing special products or groups of products has gone even further.

The successors of the early printers, it has often been observed, are not only the printers of to-day, with their own specialised establishments, but also the producers of wood pulp, of various

kinds of paper, of inks and their different ingredients, of type-metal and of type, the group of industries concerned with the technical parts of the producing of illustrations, and the manufacturers of specialised tools and machines for use in printing and in these various auxiliary industries. The list could be extended, both by enumerating other industries which are directly ancillary to the present printing trades and by going back to industries which, while supplying the industries which supply the printing trades, also supply other industries, concerned with preliminary stages in the making of final products other than printed books and newspapers. I do not think that the printing trades are an exceptional instance, but I shall not give other examples, for I do not want this paper to be too much like a primer of descriptive economics or an index to the reports of a census of production. It is sufficiently obvious, anyhow, that over a large part of the field of industry an increasingly intricate nexus of specialised undertakings has inserted itself between the producer of raw materials and the consumer of the final product.

With the extension of the division of labour among industries the representative firm, like the industry of which it is a part, loses its identity. Its internal economies dissolve into the internal and external economies of the more highly specialised undertakings which are its successors, and are supplemented by new economies. In so far as it is an adjustment to a new situation created by the growth of the market for the final products of industry the division of labour among industries is a vehicle of increasing returns. It is more than a change of form incidental to the full securing of the advantages of capitalistic methods of production—although it is largely that—for it has some advantages of its own which are independent of changes in productive technique. For example, it permits of a higher degree of specialisation in management, and the advantages of such specialisation are doubtless often real, though they may easily be given too much weight. Again, it lends itselt to a better geographical distribution of industrial operations, and this advantage is unquestionably both real and important. Nearness to the source of supply of a particular raw material or to cheap power counts for most in one part of a series of industrial processes, nearness to other industries or to cheap transport in another part, and nearness to a larger centre of population in yet another. A better *combination* of advantages of location, with a smaller element of compromise, can be had by the more

specialised industries. But the largest advantage secured by the division of labour among industries is the fuller realising of the economies of capitalistic or roundabout methods of production. This should be sufficiently obvious if we assume, as we must, that in most industries there are effective, though elastic, limits to the economical size of the individual firm. The output of the individual firm is generally a relatively small proportion of the aggregate output of an industry. The degree in which it can secure economies by making its own operations more roundabout is limited. But certain roundabout methods are fairly sure to become feasible and economical when their advantages can be spread over the output of the whole industry. These potential economies, then, are segregated and achieved by the operations of specialised undertakings which, taken together, constitute a new industry. It might conceivably be maintained that the *scale* upon which the firms in the new industry are able to operate is the secret of their ability to realise economies for industry as a whole, while presumably making profits for themselves. This is true in a way, but misleading. The scale of their operations (which is only incidentally or under special conditions a matter of the size of the individual firm) merely reflects the size of the market for the final products of the industry or industries to whose operations their own are ancillary. And the principal advantage of large-scale operation at this stage is that it again makes methods economical which would be uneconomical if their benefits could not be diffused over a large final product.

In recapitulation of these variations on a theme from Adam Smith there are three points to be stressed. First, the mechanism of increasing returns is not to be discerned adequately by observing the effects of variations in the size of an individual firm or of a particular industry, for the progressive division and specialisation of industries is an essential part of the process by which increasing returns are realised. What is required is that industrial operations be seen as an interrelated whole. Second, the securing of increasing returns depends upon the progressive division of labour, and the principal economies of the division of labour, in its modern forms, are the economies which are to be had by using labour in roundabout or indirect ways. Third, the division of labour depends upon the extent of the market, but the extent of the market also depends upon the division of labour. In this circumstance lies the possibility of economic progress, apart from the progress which comes as a result of the new knowledge

which men are able to gain, whether in the pursuit of their economic or of their non-economic interests.

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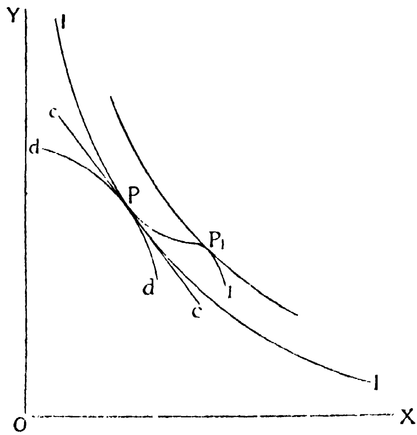
NOTE

In the accompanying construction (which owes much to Pareto), a collective indifference curve, I, is defined by the condition that, at equal cost, there would be no sufficient inducement for the community to alter an annual production of x units of one commodity and y units of another in order to secure the alternative combination of the two commodities indicated by any other point on the curve.[1] Each commodity might be taken as representative of a special class of commodities,



produced under generally similar conditions. Or one commodity might be made to represent "other goods in general," the annual outlay of productive exertions being regarded as constant. Alternatively, one commodity might represent "leisure" (as a collective name for all non-productive uses of time). The other would then represent the aggregate economic product.

There will be equilibrium (subject to instability of a kind which will be described presently) at a point P, if at that point a curve of equal costs, such as d, is tangent to the indifference curve. The curve of equal costs defines the terms upon which the community can exchange one commodity for the other by merely producing less of the one and more of the other (abstraction being made of any incidental costs of

[1] The collective indifference is to be taken as an expository device, not as a rigorous conception. The relative weights to be assigned to the individual indifference curves of which it is compounded will depend upon how the aggregate product is distributed, and this will not be the same for all positions of P.

change). Negative curvature, as in *d*, reflects a condition of decreasing returns, in the sense that more of either commodity can be had only by sacrificing progressively larger amounts of the other. Although a sufficient condition, the presence of decreasing returns is not a necessary condition of equilibrium. There would be a loss in moving away from P if equal costs were defined by the straight line *c*, which represents constant returns. Increasing returns, even, are consistent with equilibrium, provided that the degree of curvature of their graph is less than that of the indifference curve. It might happen, of course, that returns would decrease in one direction and increase in the other. Curve *d*, for example, might have a point of inflexion at or near P.

Consider now the conditions of departure from equilibrium. The curve *i* is drawn so as to represent *potential* increasing returns between P and P_1, which lies on a preferred indifference curve. If these increasing returns were to be had merely for the taking, if *i* were, for example, merely a continuation of the upper segment of *d* or *c*, P would not be a point even of unstable equilibrium. The advance from P to P_1 would be made by merely altering the proportions of the two commodities produced annually. To isolate the *problem* of increasing returns it is necessary to assume that P is a true point of equilibrium in the sense that it is determined by a curve of equal costs, such as *d* or *c*. The problem, then, has to do with the way in which the lower segment of *d* or *c* can be transformed into or replaced by such a curve as *i*. This requires, of course, that *additional* costs be incurred, of a kind which have not yet been taken into account. To diminish the amount of the one commodity which must be sacrificed for a given increment of the other, some of the labour hitherto devoted to its production must be used indirectly, so that the increase of the annual output of the one lags behind the curtailing of the output of the other.

This new element of cost might be taken into account by utilising a third dimension, but it is simpler to regard it as operating upon Δx, the increment in x accompanying the movement from P to P_1, so as to move the indifference curve upon which P_1 lies towards the left. It would be an error, however, to think that the combinations of x with y and $x +$ (Δx) with $y - \Delta y$ (where (Δx) is the contracted form of Δx) are themselves indifferent, so that P_1 is, in effect, brought over on to the original indifference curve, I, and no advantage is reaped. The path from P to P_1 is a *preferred* route, not merely a segment of an indifference curve. The cost of moving along that route is a function of the *rate* (in time) of the movement. An equilibrium rate (which need not be constant), such as would keep the movement from P to P_1 continuous and undeviating, would be determined by the condition, not that (Δx) and $- \Delta y$ should negate one another, but that either an acceleration or a retarding of the rate would be costly or disadvantageous. Because a mountain climber adjusts his pace to his physical powers and to the conditions of the ascent, it does not follow that he might as well have stayed at the foot. Or, alternatively but not inconsistently,

the movement from P to P_1 may be conceived as made up of a series of small steps, each apparently yielding no more than a barely perceptible advantage, but only because the scale of reference for both costs and advantages depends at each step upon the position which has then been reached.

Several sets of circumstances will affect the amount and direction of the movement. (1) Even if i has no point of inflexion, such as has been indicated at P_1 (merely to simplify the first stages of this analysis), it will sooner or later (taking into account the "contraction" of Δx) become tangent to an indifference curve. In the absence of any other factor making for change, progress would then come to an end. (2) There may be another possible alternative path of increasing returns extending upwards from P and curving away from I. The most advantageous route will then be a compromise between (or a resultant of) the two limiting alternatives. In such circumstances the only effective limitation imposed upon the extent of the movement may come from the failure of elasticity of demand on one side or the other. (3) Successive indifference curves cannot be supposed to be symmetrical, in the sense that dy/dx remains the same function of y/x. If, for example, the slope of successive indifference curves at points corresponding to given values of y/x decreases (indicating that the demand for the commodity measured in units of y is relatively inelastic), freedom of movement in the direction of P_1 is reduced, while it becomes advantageous to move a little way in the opposite direction along even such a path as c or d. Under inverse conditions (with $-dy/dx$ increasing relatively to y/x for successive indifference curves) the extent of the possible movement in the direction of P_1 is increased. This conclusion amounts to no more than the obvious theorem that the degree in which the decreasing returns encountered in certain fields of economic activity operate as a drag upon the securing of increasing returns in other fields depends upon the relative elasticities of demand for the two types of products. But this consideration, like the others of which note has been made, serves to make clear the general nature of the reciprocal relation between increasing returns and the "extent of the market." (4) Discoveries of new supplies of natural resources or of *new* productive methods may have either or both of two kinds of effects. They may tilt the curves of equal cost and they may modify their curvature favourably. In either event a point such as P is moved to a higher indifference curve, and the paths along which further progress can be made are altered advantageously.

A MATHEMATICAL THEORY OF SAVING

I

The first problem I propose to tackle is this: how much of its income should a nation save? To answer this a simple rule is obtained valid under conditions of surprising generality; the rule, which will be further elucidated later, runs as follows.

The rate of saving multiplied by the marginal utility of money should always be equal to the amount by which the total net rate of enjoyment of utility falls short of the maximum possible rate of enjoyment.

In order to justify this rule it is, of course, necessary to make various simplifying assumptions: we have to suppose that our community goes on for ever without changing either in numbers or in its capacity for enjoyment or in its aversion to labour; that enjoyments and sacrifices at different times can be calculated independently and added; and that no new inventions or improvements in organisation are introduced save such as can be regarded as conditioned solely by the accumulation of wealth.[1]

One point should perhaps be emphasised more particularly; it is assumed that we do not discount later enjoyments in comparison with earlier ones, a practice which is ethically indefensible and arises merely from the weakness of the imagination; we shall, however, in Section II include such a rate of discount in some of our investigations.

We also ignore altogether distributional considerations, assuming, in fact, that the way in which consumption and labour are distributed between the members of the community depends solely on their total amounts, so that total satisfaction is a function of these total amounts only.

Besides this, we neglect the differences between different kinds of goods and different kinds of labour, and suppose them to be expressed in terms of fixed standards, so that we can speak simply of quantities of capital, consumption and labour without discussing their particular forms.

Foreign trade, borrowing and lending need not be excluded, provided we assume that foreign nations are in a stable state, so

[1] *I.e.* they must be such as would not occur without a certain degree of accumulation, but could be foreseen given that degree.

that the possibilities of dealing with them can be included on the constant conditions of production. We do, however, reject the possibility of a state of progressive indebtedness to foreigners continuing for ever.

Lastly, we have to assume that the community will always be governed by the same motives as regards accumulation, so that there is no chance of our savings being selfishly consumed by a subsequent generation; and that no misfortunes will occur to sweep away accumulations at any point in the relevant future.

Let us then denote by $x(t)$ and $a(t)$ the total rates of consumption and labour of our community, and by $c(t)$ its capital at time t. Its income is taken to be a general function of the amounts of labour and capital, and will be called $f(a,c)$; we then have, since savings plus consumption must equal income,

$$\frac{dc}{dt} + x = f(a,c) \quad . \quad . \quad . \quad . \quad . \quad . \quad (1)$$

Now let us denote by $U(x)$ the total rate of utility of a rate of consumption x, and by $V(a)$ the total rate of disutility of a rate of labour a; and the corresponding marginal rates we will call $u(x)$ and $v(a)$;

so that
$$u(x) = \frac{dU(x)}{dx}$$
$$v(a) = \frac{dV(a)}{da}.$$

We suppose, as usual, that $u(x)$ is never increasing and $v(a)$ never decreasing.

We have now to introduce a concept of great importance in our argument. Suppose we have a given capital c, and are going neither to increase nor decrease it. Then $U(x) - V(a)$ denotes our net enjoyment per unit of time, and we shall make this a maximum, subject to the condition that our expenditure x is equal to what we can produce with labour a and capital c. The resulting rate of enjoyment $U(x) - V(a)$ will be a function of c, and will, up to a point, increase as c increases, since with more capital we can obtain more enjoyment.

This increase of the rate of enjoyment with the amount of capital may, however, stop for either of two reasons. It might, in the first place, happen that a further increment of capital would not enable us to increase either our income or our leisure; or, secondly, we might have reached the maximum conceivable rate of enjoyment, and so have no use for more income or leisure. In either case a certain finite capital would give us the greatest

rate of enjoyment economically *obtainable*, whether or not this was the greatest rate *conceivable*.

On the other hand, the rate of enjoyment may never stop increasing as capital increases. There are then two logical possibilities: either the rate of enjoyment will increase to infinity, or it will approach asymptotically to a certain finite limit. The first of these we shall dismiss on the ground that economic causes alone could never give us more than a certain finite rate of enjoyment (called above the maximum conceivable rate). There remains the second case, in which the rate of enjoyment approaches a finite limit, which may or may not be equal to the maximum conceivable rate. This limit we shall call the maximum *obtainable* rate of enjoyment, although it cannot, strictly speaking, be obtained, but only approached indefinitely.

What we have in the several cases called the maximum obtainable rate of enjoyment or utility we shall call for short *Bliss* or B. And in all cases we can see that the community must save enough either to reach *Bliss* after a finite time, or at least to approximate to it indefinitely. For in this way alone is it possible to make the amount by which enjoyment falls short of bliss summed throughout time a finite quantity; so that if it should be possible to reach bliss or approach it indefinitely, this will be infinitely more desirable than any other course of action. And it is bound to be possible, since by setting aside a small sum each year we can in time increase our capital to any desired extent.[1]

Enough must therefore be saved to reach or approach bliss some time, but this does not mean that our whole income should be saved. The more we save the sooner we shall reach bliss, but the less enjoyment we shall have now, and we have to set the one against the other. Mr. Keynes has shown me that the rule governing the amount to be saved can be determined at once from these considerations. But before explaining his argument it will be best to develop equations which can be used in the more general problems which we shall consider later.

[1] As it stands this argument is incomplete, since in the last case considered above bliss was the limiting value, as capital tends to infinity, of the enjoyment obtainable by spending our *whole income*, and so making no provision for increasing capital further. The lacuna can easily be filled by remarking that to save £$\frac{1}{n}$ in the nth year would be sufficient to increase capital to infinity (since $\Sigma\frac{1}{n}$ is divergent), and that the loss of income $\left(£\frac{1}{n}\right)$ would then decrease to zero, so that the limiting values of income and expenditure would be the same.

The first of these comes from equating the marginal disutility of labour at any time to the product of the marginal efficiency of labour by the marginal utility of consumption at that time,

i.e.
$$v(a) = \frac{\partial f}{\partial a} u(x) \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (2)$$

The second equates the advantage derived from an increment Δx of consumption at time t, to that derived by postponing it for an infinitesimal period Δt, which will increase its amount to $\Delta x\left(+ \frac{\partial f}{\partial c}\Delta t\right)$, since $\frac{\partial f}{\partial c}$ gives the rate of interest earned by waiting. This gives

$$u\{x(t)\} = \left\{1 + \frac{\partial f}{\partial c}\Delta t\right\} u\{x(t + \Delta t)\}$$

or in the limit

$$\frac{d}{dt}u(x(t)) = -\frac{\partial f}{\partial c} \, . \, u(x(t)) \quad . \quad . \quad . \quad . \quad (3)$$

This equation means that $u(x)$, the marginal utility of consumption, falls at a proportionate rate given by the rate of interest. Consequently x continually increases unless and until either $\frac{\partial f}{\partial c}$ or $u(x)$ vanishes, in which case it is easy to see that bliss must have been attained.

Equations (1), (2) and (3) are sufficient to solve our problem provided we know c_0, the given capital with which the nation starts at $t = 0$, the other "initial condition" being supplied by considerations as to the behaviour of the function as $t \to \infty$.

To solve the equations we proceed as follows: noticing that x, a and c are all functions of one independent variable, the time, we have

$$\frac{d}{dx}\{u(x) \, . \, f(a,c)\} = \frac{du}{dx} \, . f(a,c) + u(x)\frac{\partial f}{\partial a}\frac{da}{dx} + u(x)\frac{\partial f}{\partial c}\frac{dc}{dt}\frac{dt}{dx}$$

$$= \frac{du}{dx}f(a,c) + v(a)\frac{da}{dx} - \frac{du(x)}{dt}\{f(a,c) - x\}\frac{dt}{dx}$$

$$= x\frac{du}{dx} + v(a)\frac{da}{dx}. \quad \text{(Using (2), (3) and (1).)}$$

Consequently, integrating by parts

$$u(x) \, . \, f(a,c) = xu(x) - U(x) + V(a) + \text{a constant } K,$$

or
$$\frac{dc}{dt} = f(a,c) - x = \frac{K - \{U(x) - V(a)\}}{u(x)}. \quad . \quad . \quad (4)$$

We have now to identify K with what we called B, or bliss. This is most easily done by starting in a different way.

$\int_0^\infty (B - U(x) + V(a))dt$ represents the amount by which enjoyment falls short of bliss integrated throughout time; this is (or can be made) finite, and our problem is to minimise it. If we apply the calculus of variations straight away, using equation (1), we get equations (2) and (3) again; but if, instead of this, we first change the independent variable to c, we get a great simplification. Our integral becomes

$$\int_c^\infty \frac{B - U(x) + V(a)}{dc/dt} dc^{1}$$

or

$$\int_{c_0}^\infty \frac{B - U(x) + V(a)}{f(a,c) - x} dc. \quad \text{Using (1).}$$

Now in this x and a are entirely arbitrary functions of c, and to minimise the integral we have simply to minimise the integrand by equating to zero its partial derivatives. Taking the derivative with respect to x we obtain:

$$\frac{-u(x)}{f(a,c) - x} + \frac{B - U(x) + V(a)}{\{f(a,c) - x\}^2} = 0;$$

consequently
$$\frac{dc}{dt} = f(a,c) - x = \frac{B - (U(x) - V(a))}{u(x)} \quad . \quad . \quad (5)$$

or, as we stated at the beginning,

rate of saving multiplied by marginal utility of consumption should always equal bliss minus actual rate of utility enjoyed.

Mr. Keynes, to whom I am indebted for several other suggestions, has shown me that this result can also be obtained by the following simple reasoning.

Suppose that in a year we ought to spend £x and save £z. Then the advantage to be gained from an extra £1 spent is $u(x)$, the marginal utility of money, and this must be equated to the sacrifice imposed by saving £1 less.

Saving £1 less in the year will mean that we shall only save £z in $1 + \frac{1}{z}$ years, not, as before, in one year. Consequently, we shall be in $1 + \frac{1}{z}$ year's time exactly where we should have been in one year's time, and the whole course of our approach

[1] The upper limit will not be ∞, but the least capital with which bliss can be obtained, if this is finite. c steadily increases with t, at any rate until the integrand vanishes, so that the transformation is permissible.

to bliss will be postponed by $\frac{1}{z}$ of a year, so that we shall enjoy $\frac{1}{z}$ of a year less bliss and $\frac{1}{z}$ of a year more at our present rate. The sacrifice is, therefore,

$$\frac{1}{z}\{B - (U(x) - V(a)\}.$$

Equating this to $u(x)$, we get equation (5) again, if we replace z by $\frac{dc}{dt}$, its limiting value.

Unfortunately this simple reasoning cannot be applied when we take account of time-discounting, and I have therefore retained my equations (1)–(4), which can easily be extended to deal with more difficult problems.

The most remarkable feature of the rule is that it is altogether independent of the production function $f(a, c)$, except in so far as this determines bliss, the maximum rate of utility obtainable. In particular the amount we should save out of a given income is entirely independent of the present rate of interest, unless this is actually zero. The paradoxical nature of this result will to some extent be mitigated later, when we find that if the future is discounted at a constant rate ρ and the rate of interest is constant and equal to r, the proportion of income to be saved is a function of the ratio ρ/r. If $\rho = 0$ this ratio is 0 (unless r be 0 also) and the proportion to be saved is consequently independent of r.

The rate of saving which the rule requires is greatly in excess of that which anyone would normally suggest, as can be seen from the following table, which is put forward merely as an illustration.

Family income per annum.	Total utility.
£150	2
£200	3
£300	4
£500	5
£1000	6
£2000	7
£5000	8 = Bliss.

If we neglect variations in the amount of labour, the amount that should be saved out of a family income of £500 would be about £300. For then bliss minus actual rate of utility = 8 — = 5. Savings = £300 and marginal utility of consumption at

£200 = about $\frac{1}{£60}$. (From £150 to £300 $U(x) = \frac{13x}{300} - 3 - \frac{x^2}{15{,}000}$, approximating by fitting a parabola, so that $u(x) = \frac{13}{300} - \frac{x}{7{,}500} = \frac{1}{60}$ if $x = 200$.)

It is worth pausing for a moment to consider how far our conclusions are affected by considerations which our simplifying assumptions have forced us to neglect. The probable increase of population constitutes a reason for saving even more, and so does the possibility that future inventions will put the bliss level higher than at present appears. On the other hand, the probability that future inventions and improvements in organisation are likely to make income obtainable with less sacrifice than at present is a reason for saving less. The influence of inventions thus works in two opposite ways : they give us new needs which we can better satisfy if we have saved up beforehand, but they also increase our productive capacity and make preliminary saving less urgent.

The most serious factor neglected is the possibility of future wars and earthquakes destroying our accumulations. These cannot be adequately accounted for by taking a very low rate of interest over long periods, since they may make the rate of interest actually negative, destroying as they do not only interest, but principal as well.

II

I propose now to assume that returns to capital and labour are constant and independent,[1] so that

$$f(a,c) = pa + rc,$$

where p, the rate of wages, and r, the rate of interest, are constants.

This assumption will enable us

(a) To represent our former solution by a simple diagram;

(b) To extend it to the case of an individual who only lives a finite time;

(c) To extend it to include the problem in which future utilities and disutilities are discounted at a constant rate.

[1] It is worth noting that in most of (a) we only require independence of returns, and not constancy, and that nowhere do we really require *wages* to be constant, but these assumptions are made throughout to simplify the statement. They are less absurd if the state is one among others which are only advancing slowly, so that the rates of interest and wages are largely independent of what our particular state saves and earns.

On our new hypothesis the income of the community falls into two clearly defined parts, pa and rc, which it will be convenient to call its *earned* and *unearned* income respectively.

(a) Equation (2), which now reads

$$v(a) = pu(x),$$

determines a as a function of x only, and we can conveniently put

$$y = x - pa = \text{consumption} - \text{earned income}$$
$$w(y) = u(x) = v(a)/p$$
$$W(y) = \int w(y)dy = \int(u(x)dx - v(a)da) = U(x) - V(a).$$

$W(y)$ may be called the total and $w(y)$ the marginal utility of unearned income, since they are the total and marginal utilities arising from the possession of an unearned income y available for consumption.

Equation (5) now gives

$$rc - y = f(a,c) - x = \frac{B - W(y)}{w(y)} \quad . \quad . \quad . \quad (6)$$

or

$$B - W(y) = \frac{dW}{dy}(rc - y),$$

which means that the point (rc, B) lies on the tangent at y to the curve $z = W(y)$.

Figure (1) shows the curve $z = W(y)$, which either attains the value B at a finite value y_1 (the case shown in the figure) or else approaches it asymptotically as $y \to \infty$.

In order to determine how much of a given unearned income rc should be saved, we take the point P, (rc, B), on the line $z = B$, and from it draw a tangent to the curve (not $z = B$, which will always be one tangent, but the other one). If the abscissa of Q, the point of contact, is y, an amount y of the unearned income should be consumed, and the remainder, $rc - y$, should be saved. Of course y may be negative, which would mean that not only would the whole unearned income be saved, but part of the earned income also.

It is easy to see that there must always be such a tangent, because the curve $z = W(y)$ will have a tangent or asymptote $y = -\eta$, where η is the greatest excess of earnings over consumption compatible with continued existence.

This rule determines how much of a given income should be spent, but it does not tell us what our income will amount to

after a given lapse of time. This is obtained from equation (3), which now gives us

$$\frac{d}{dt}w(y) = -rw(y)$$

or

$$w(y) = Ae^{-rt} \quad . \quad . \quad . \quad . \quad . \quad . \quad . \quad (7)$$

Here $A = w(y_0)$, where y_0 is the value of y for $t = o$ determined as the abscissa of Q, where P is (rc_0, B).

Supposing, then, we want to find the time taken in accumulating a capital c from an initial capital c_0, we take P to be the

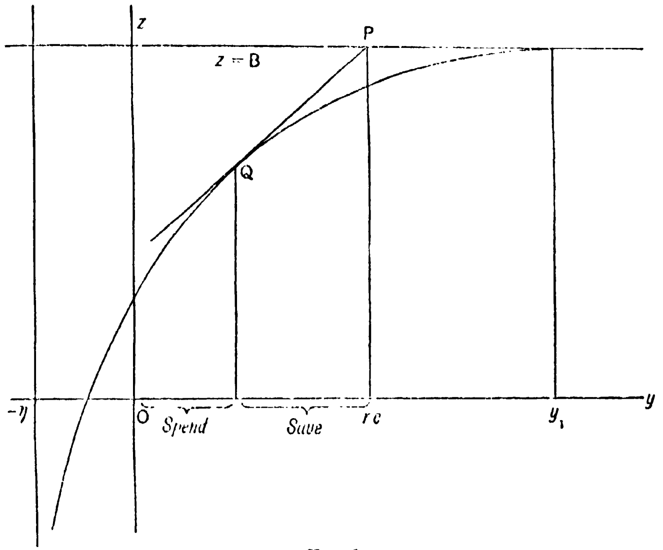


FIG. 1.

point (rc, B) and P_0 to be (rc_0, B). $w(y)$ is then the slope of the tangent from P, and $w(y_0)$ the slope of the tangent from P_0, so that the time in question

$$= \frac{1}{r} \log_e \frac{w(y_0)}{w(y)} = \frac{1}{r} \log_e \frac{\text{slope of tangent from } P_0}{\text{slope of tangent from } P}.$$

(*b*) Suppose now that we are concerned with an individual who lives only for a definite time, say T years, instead of with a community which lives for ever. We still have equation (4)

$$f(a,c) - x = \frac{K - (Ux - V(a))}{u(x)}$$

or

$$rc - y = \frac{K - W(y)}{w(y)} \quad . \quad . \quad . \quad . \quad (8)$$

but K is no longer equal to B, and has still to be determined. In order to find it we must know how much capital our man feels it necessary to leave his heirs; let us call this c_3.

Equation (8) means, as before, that y can be found as the abscissa of the point of contact Q of a tangent drawn from (rc, K) or P to the curve. P always lies on $z = K$, and its abscissa begins by being rc_0 and ends by being rc_3. K we can take as being less than B, since a man who lives only a finite time will save less than one who lives an infinite time, and the greater K is, the greater will be the rate of saving. Consequently $z = K$ will meet the curve, say at P_4.

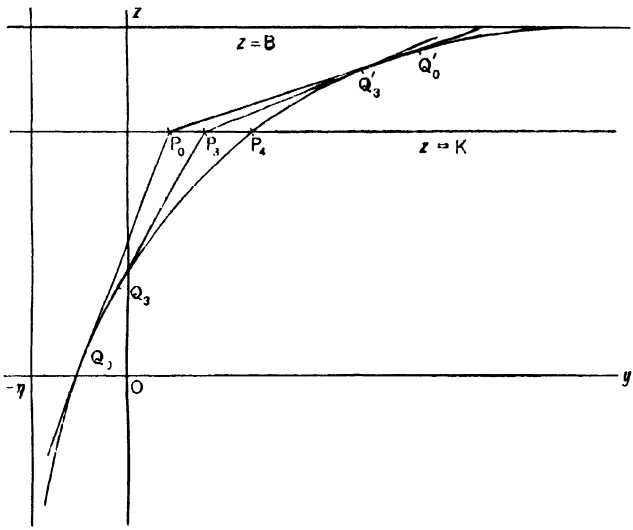


FIG. 2.

From both P_0 and P_3 there will be two tangents to the curve, of which either the upper or the lower can, for all we know, be taken as determining y_0 and y_3. If, however, $c_3 > c_0$ as in Fig. 2, we can only take the lower tangent from P_0, since the upper tangent gives a value of y_0 greater than either of the values of y_3, which is impossible, as y continually increases. Taking, then, Q_0 as the point of contact of the lower tangent from P_0, there are two possible cases, according as we take as giving y_3 either Q_3, the lower, or Q_3', the upper value. If we take Q_3, P_0 moves straight to P_3, and there is saving all the time; this happens when T is small. But if T is large, Q_0 moves right along to Q_3', and P_0 goes first up to P_4, and then back to P_3;

to begin with there is saving, and subsequently splashing. Similarly, if $c_0 > c_3$, there are two possible cases, and in this case it is the lower tangent from P_3 that cannot be taken.

In order to determine which tangents to take and also the value of K we must use the condition derived from equation (7)

$$\frac{\text{slope of tangent taken from } P_0}{\text{slope of tangent taken from } P_3} = \frac{w(y_0)}{w(y_3)} = e^{rT}.$$

This, together with the fact that the abscissae of P_0 and P_3 are c_0, c_3, and that they have the same ordinate K, suffices to fix both K and the tangents to be taken.

(c) We have now to see how our results must be modified when we no longer reckon future utilities and disutilities as equal to present ones, but discount them at a constant rate ρ.

This rate of discounting future *utilities* must, of course, be distinguished from the rate of discounting future sums of money. If I can borrow or lend at a rate r I must necessarily be equally pleased with an extra £1 now and an extra £$(1 + r)$ in a year's time, since I could always exchange the one for the other. My marginal rate of discount for money is, therefore, necessarily r, but my rate of discount for utility may be quite different, since the marginal utility of money to me may be varying by my increasing or decreasing my expenditure as time goes on.

In assuming the rate of discount constant, I do not mean that it is the same for all individuals, since we are at present only concerned with one individual or community, but that the present value of an enjoyment at any future date is to be obtained by discounting it at the rate ρ. Thus, taking it to be about $\frac{3}{4}$ per cent., utility at any time would be regarded as twice as desirable as that a hundred years later, four times as valuable as that two hundred years later and so on at a compound rate. This is the only assumption we can make, without contradicting our fundamental hypothesis that successive generations are actuated by the same system of preferences. For if we had a varying rate of discount—say a higher one for the first fifty years—our preference for enjoyments in 2000 A.D. over those in 2050 A.D. would be calculated at the lower rate, but that of the people alive in 2000 A.D. would be at the higher.

Let us suppose first that the rate of discount for utility ρ is less than the rate of interest r.

Then equations (1) and (2) are unchanged, but equation (3) becomes

$$\frac{d}{dt}u(x) = -u(x)\left\{\frac{\partial f}{\partial c} - \rho\right\}$$
$$= -u(x)(r - \rho) \quad . \quad . \quad . \quad . \quad . \quad . \quad (9)$$

as we are now assuming $\frac{\partial f}{\partial c}$ constant and equal to r;

consequently $\qquad w(y) = u(x) = Ae^{-(r-\rho)t} \quad . \quad . \quad . \quad . \quad (9a)$

and $\qquad rc - y = \frac{dc}{dt} = \frac{dc}{dw} \cdot \frac{dw}{dt} = -(r - \rho)w\frac{dc}{dw}$

so $\qquad \frac{dc}{dw} + \frac{rc}{(r - \rho)w} = \frac{y}{(r - \rho)w}$,

where $\qquad cw^{r/(r-\rho)} = \int \frac{yw^{\rho/(r-\rho)}}{r - \rho}dw + \frac{K}{r}$

$$= \frac{1}{r}yw^{r/(r-\rho)} - \frac{1}{r}\int_b^y w^{r/(r-\rho)}(y)dy + \frac{K}{r}$$

(K, b constants.)

and $\qquad \frac{dc}{dt} = rc - y = \frac{K - \int_b^y w^{r/(r-\rho)}(y)dy}{w^{r/(r-\rho)}(y)} \quad . \quad . \quad . \quad (10)$

This equation is the same as (8) except that instead of $w(y)$ and $W(y)$, which is $\int w(y)dy$, we have $w^{r/(r-\rho)}(y)$ and $\int w^{r/(r-\rho)}(y)dy$. The method of solution both for a community and for an individual is therefore the same as before, except that instead of the real utility of unearned income we have to consider what we can call its modified utility, obtained by integrating the marginal utility to the power $r/(r - \rho)$. This has the effect of accelerating the decrease of marginal utility and lessening the relative importance of high incomes. We can in this way translate our discounting of the future into a discounting of high incomes. The rate at which this is done is governed solely by the ratio of ρ to r, so that if ρ is 0 it is independent of the value of r, provided this is not also 0. The main conclusion of section I is thus confirmed.

There is, however, a slight difficulty, because we have not really shown yet that if we are considering an infinite time, the constant K is to be interpreted as what might be called "modified bliss," *i.e.* the maximum value of $\int_b^y w^{r/(r-\rho)}(y)dy$. This modified bliss would require the same income as bliss does, the modification being solely in the value set on it. This result can, however, be deduced at once from equation (9*a*), which shows that y increases until bliss is reached, so that $\frac{dc}{dt}$ can never become

negative and K cannot be less than modified bliss. On the other hand, provided this condition is fulfilled, 9(a) shows that the larger y is initially, the smaller will be A, and the larger will be y throughout future time. Hence K must be as small as possible (provided it is not so small as to make $\frac{dc}{dt}$ ultimately negative); so that K cannot be greater than modified bliss. Hence as it is neither less nor greater it must be equal.

As in (b), we can adapt our solution to the case of an individual with only a finite time to live, in this case drawing tangents to the modified utility curve.

An interesting special case is that of a community for which

$$w(y) = Dy^{-\alpha} \qquad (\alpha > 1)$$

we shall have $w^{r/(r-\rho)}(y) = Ey^{-\beta}$, $\beta = \frac{r\alpha}{r-\rho}$, $E = D^{r/(r-\rho)}$

$$\text{savings} = \frac{K - \int w^{r/(r-\rho)}(y)dy}{w^{r/(r-\rho)}(y)dy} = \frac{K - K_1 + \frac{Ey^{1-\beta}}{\beta - 1}}{Ey^{-\beta}}.$$

It is clear that corresponding to $K = B$ in the case when $\rho = 0$

we have here $$K = K_1$$

and savings $$= \frac{y}{\beta - 1}$$

i.e., a constant proportion $\frac{r-\rho}{r(\alpha-1)+\rho}$ of unearned income should be saved, which if $\rho = 0$ is $\frac{1}{\alpha - 1}$, and independent of r.

If the rate of interest is less than the rate of discounting utility, we shall have similar equations, leading to a very different result. The marginal utility of consumption will rise at a rate $\rho - r$, and consumption will fall towards the barest subsistence level at which its marginal utility may be taken as infinite, if we disregard the possibility of suicide. During this process all capital will be exhausted and debts incurred to the extent to which credit can be obtained, the simplest assumption on this point being that it will be possible to borrow a sum such that it is just possible to keep alive after paying the interest on it.

III

Let us next consider the problem of the determination of the rate of interest.

(α) In the first place we will suppose that everyone discounts future utility for himself or his heirs, at the same rate ρ.

Then in a state of *equilibrium* there will be no saving and

$$\frac{dx}{dt} = \frac{dc}{dt} = 0,$$

so that we have

$$x = f(a,c)$$

$$v(a) = \frac{\partial f}{\partial a} u(x)$$

$$\frac{\partial f}{\partial c} = \rho;$$

three equations to determine x, a and c.

The last equation tells us that the rate of interest as determined by the marginal productivity of capital, $\frac{\partial f}{\partial c}$, must be equal to the rate of discounting ρ.[1]

But suppose that at a given time, say the present, $\frac{\partial f}{\partial c} > \rho$. Then there will not be equilibrium, but saving, and since a great deal cannot be saved in a short time, it may be centuries before equilibrium is reached, or it may never be reached, but only approached asymptotically; and the question arises as to how, in the meantime, the rate of interest is determined, since it cannot be by the ordinary equilibrium equation of supply and demand.

The difficulty is that the rate of interest functions as a demand price for a whole quantity of capital, but as a supply price, not for a quantity of capital, but for a rate of saving. The resulting state of affairs is represented in Fig. 3, in which, however, variations in the amount of labour are neglected. This shows the demand curve for capital $r = \frac{\partial f}{\partial c}$, the ultimate supply curve $r = \rho$ and the temporary supply curve $c = c_0$. It is clear that the rate of interest is determined directly by the intersection of the demand curve with the temporary supply curve $c = c_0$. The ultimate supply curve $r = \rho$ only comes in as governing the rate at which c_0 approaches its ultimate value OM, a rate which depends roughly on the ratio of PM to QN. We see, therefore, that the rate of interest is governed primarily by the demand price, and may greatly exceed the reward ultimately necessary to induce abstinence.

[1] Equilibrium could, however, also be obtained either at bliss with $\rho < \frac{\partial f}{\partial c}$, or at the subsistence level with $\rho > \frac{\partial f}{\partial c}$. Cf. ($\gamma$) below.

Similarly, in the accounting of a Socialist State the function of the rate of interest would be to ensure the wisest use of existing capital, not to serve in any direct way as a guide to the proportion of income which should be saved.

(β) We must now try to take some account of the fact that different people discount future utility at different rates, and, quite apart from the time factor, are not so interested in their heirs as in themselves.

Let us suppose that they are not concerned with their heirs

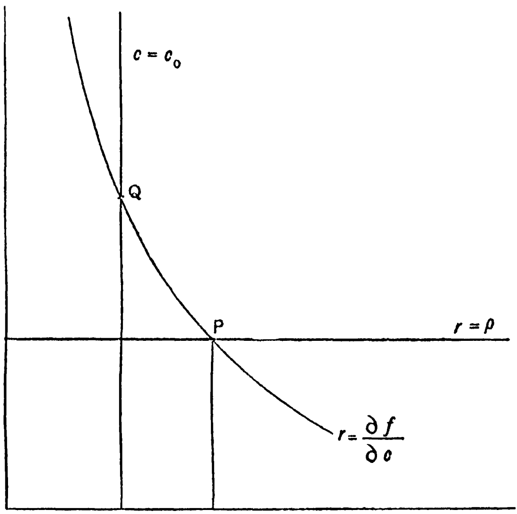


FIG. 3.

at all; that each man is charged with a share of the maintenance of such children as are necessary to maintain the population, but starts his working life without any capital and ends it without any, having spent his savings on an annuity; that within his own lifetime he has a constant utility schedule for consumption and discounts future utility at a constant rate, but that this rate may be supposed different for different people.

When such a community is in equilibrium, the rate of interest must, of course, equal the demand price of capital $\frac{\partial f}{\partial c}$. And it will also equal the "supply price," which arises in the following way. Suppose that the rate of interest is constant and equal to

r, and that the rate of discount for a given individual is ρ. Then if $r > \rho$, he will save when he is young, not only to provide for loss of earning power in old age, but also because he can get more pounds to spend at a later date for those he forgoes spending now. If we neglect variations in his earning power, his action can be calculated by modifying the equations of *IIc* to apply to a finite life as in *IIb*. He will for a time accumulate capital, and then spend it before he dies. Besides this man, we must suppose there to be in our community other men, exactly like him except for being born at different times. The total capital possessed by n men of this sort whose birthdays are spread evenly through the period of a lifetime will be n times the *average* capital possessed by each in the course of his life. The class of men of this sort will, therefore, possess a constant capital depending on the rate of interest, and this will be the amount of capital supplied by them at that price. (If $\rho > r$, it may be negative, as they may borrow when young and pay back when old.) We can then obtain the total supply curve of capital by adding together the supplies provided at a given price by each class of individual.

If, then, we neglect men's interest in their heirs, we see that capital has a definite supply price to be equated to its demand price. This supply price depends on people's rates of discount for utility, and it can be equated to the rate of discount of the "marginal saver" in the sense that someone whose rate of discount is equal to the rate of interest will neither save nor borrow (except to provide for old age).

But the situation is different from the ordinary supply problem, in that those beyond this "margin" do not simply provide nothing, but provide a negative supply by borrowing when young against their future earnings, and so being on the average in debt.

(γ) Let us now go back to case (α) by supposing men, or rather families, to live for ever, and discount future utility at a constant rate, but let us try this time to take account of variations in the rate of discount from family to family.

For simplicity let us suppose that the amount of labour is constant, so that the total income of the country can be regarded as a function $f(c)$ of the capital only. The rate of interest will then be $f'(c)$. Let us also suppose that every individual could attain the maximum *conceivable* utility with a finite income x_1, and that no one could support life on less than x_2.

Now suppose equilibrium [1] is obtained with capital c, income $f(c)$ and rate of interest $f'(c)$ or r. Then those families, say $m(r)$ in number, whose rate of discount is less than r must have attained bliss or they would still be increasing their expenditure according to equation (9a). Consequently they have between them an income $m(r) . x_1$. The other families, $n - m(r)$ in number (where n is the total number of families), must be down to the subsistence level, or they would still be decreasing their expenditure. Consequently they have between them a total income $\{n - m(r)\}x_2$,

whence
$$\begin{aligned} f(c) &= m(r)x_1 + \{n - m(r)\}x_2 \\ &= n . x_2 + m(r)\{x_1 - x_2\}, \end{aligned}$$

which, together with $r = f'(c)$, determines r and c. $m(r)$ being an increasing function of r, it is easy to see, by drawing graphs of r against $f(c)$, that the two equations have in general a unique solution.[2]

In such a case, therefore, equilibrium would be attained by a division of society into two classes, the thrifty enjoying bliss and the improvident at the subsistence level.

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[1] We suppose each family in equilibrium, which is the only way in which that state could be maintained, since otherwise, although the savings of some might at any moment balance the borrowings of others, they would not continue to do so except by an extraordinary accident.

[2] We have neglected in this the negligible number of families for which ρ is exactly equal to r.

THE INCIDENCE OF TAXATION IN AGRICULTURE [1]

Although numerous publications dealing with such matters as theories of taxation in relation to agriculture, methods of rating and suggested modifications therein are extant, no composite review of the situation at given periods is available, nor has any estimate of the fiscal position occupied by agriculturists in comparison with persons pursuing other industries appeared. This has constituted a handicap to students of agricultural economics which it is hoped upon the present occasion in some slight measure to remedy.

There are two distinct lines of approach to the subject—the historical and the statistical, and for each a mass of relevant and authoritative material is available, viz. the *Reports* of Departmental Committees, White Papers and statistical abstracts. Before proceeding to analysis it should be made clear, firstly, that this survey is confined to England and Wales, for the divergent systems in force north of the Border, where custom, law and even Nature all differ so widely, prohibit the inclusion of Scotland, and, secondly, that the large landowner is excluded from what is in effect an investigation into the circumstances of the tenant and of the smaller occupying-owner. Such treatment of the receiver of agricultural rents is drastic, but the immediate object in view is to ascertain the position of individuals pursuing agriculture as a means of livelihood. It will, moreover, be agreed that, no matter upon whom the first impact may occur, the owner meets a larger proportion of the statutory charges than the 50 per cent. which nowadays legally falls upon him, and, further, that the trend of legislation during the last two generations has been cumulatively to add to his load. Incidentally, approximately one-quarter of all farms are now owned by their occupiers. References to methods of assessment, to their efficacy, to the nature of the charges themselves—whether beneficial or onerous—or to any analysis of the causes of their fluctuations, cannot be attempted in what is merely a review of the situation occupied by the agriculturist now and in certain periods of the more recent past. Thus, too, aggregate, not individual, payments and average

[1] Being the substance of an Address to a Joint Meeting of Sections F and M at the British Association, 1928.

contributions rather than exceptional form the basis of what follows.

Chronologically, wherever one turns, such expressions as the following are found :—" Poor rates, which no longer back than twenty years were so light that a farmer when he went to take a farm hardly thought it worth while to inquire the amount of them; but it is now become the first question he must ask " (Kent, writing in 1796). In 1924 an audience of Norfolk farmers, unwittingly, but enthusiastically, endorsed the words of a resolution protesting against the weight of taxation which had been adopted by their grandfathers, with infinitely more cause, exactly a century earlier. Last July the *Field* contained the following words :—" Agriculture has long suffered from unduly heavy burdens of local taxation," and, almost simultaneously, when dealing with the position of the *farmer*, the Council of the Central Land-Owners' Association stated that " the present position, in comparison with previous depressions, is aggravated by the infinitely greater burden of taxation." In August, a leading article in *The Times* held that there was " still a possibility that when farmers are finally freed from the burden of the rates, they may be able by their own exertions to survive this crisis." The statements made by witnesses before each Commission, from 1819 to 1919, are couched in almost identical terms. In fact, every generation of those associated with the land has considered itself exceptionally hard hit by what it designates as its " burdens." The Tribunal of Investigation was peculiar in this respect, for its *Report* contained no reference to the question. Were circumstances different in 1924, or did that body correctly and tacitly sum up the situation?

Apart from Death duties, which, despite their heavy impact in certain circumstances, do not come within the scope of this inquiry, the so-called " Burdens " are four in number—Rates, Tithe, Land tax and Income tax. It is common ground that all these charges fall on persons and not on property, but, on the other hand, economists will not freely endorse a popular tenet that the land is " the farmer's raw material," and, as such, should exempt him from contributing to local and national funds; if more legitimately regarded as a factory, the organisation of its numerous small and independent cultivator-capitalists still renders the question of taxation peculiarly difficult.

With the exception of the two decades following the Napoleonic war, the collective weight of the charges in question, when compared with the other outgoings of the agriculturist, have never

been really heavy, for, up to the first few years of the nineteenth century, even in the arable districts of the east of England, the weight of all forms of taxation represented from 7 to 10 per cent. of the gross expenditure. During the disastrous period of the 1820's the charges more than doubled, and then formed at least 15 per cent. Conditions are familiar to all when rates, a large proportion of which fell upon the rural areas, were levied at the rate of twenty, thirty and even forty shillings in the pound; when tithe, taken in kind, was literally a tenth of the farm produce; when Land tax quotas were levied at 4*s*. in the pound, and when Income tax, as a new instrument, was effective at 10 per cent. down to the lower end of the scale. At that time the farmer, suffering in addition under a heavy load of direct taxation, was on more than terms of equality with other contributors.

Turn, however, to the period, two generations later, when the industry was experiencing its greatest economic depression. The *Reports* of the Commissioners of 1894 afford abundant evidence of the actual decline in the weight of taxation before any statutory steps to that end had been taken by Parliament. Between the years 1883 and 1894 the account-books of farms, scattered over England, reveal payments of rates ranging from 1·2 per cent. of outgoings up to 6·1 per cent., with an over-all average of under 3 per cent.—equivalent to a little more than 2*s*. an acre. Sir E. W. Hamilton, in evidence before the Commission, officially corroborated these figures, saying that the rates on agricultural land then averaged 2*s*. 2*d*. per acre. The total contributions to national and local taxation were, in the words of the Commissioners, " 3*s*. per acre, of which between 2*s*. and 2*s*. 8*d*. may be taken to be rates." The following Table, relating to a Suffolk farm of some six hundred acres, has been evolved from the *Report* in question, and exhibits the steady nature of the favourable movement:—

PERCENTAGE OF TOTAL OUTGOINGS.

Years.	Tithe.	Rates and Taxes.	All " Burdens."
1839–43	6·1	3·9	10·0
1863–7	4·2	2·4	6·6
1871–5	3·4	1·3	4·7
1890–3	3·2	1·3	4·5

In the early 'nineties it could not be said with truth that the level of taxation was high, but the times were exceptionally difficult, and, as a result of the Commission's findings, the Agri-

cultural Rates Act of 1896 was passed, the maximum weight of Land tax was reduced from 4*s*. in the pound to 1*s*., and tithe was, by Statute, transferred to the shoulders of the landlord. As a direct result of this readjustment of rates, and as a gesture towards non-agricultural payers, the 1899 Commission on Taxation was set up, whose findings deserve, in the light of recent events, much fuller consideration than they received.

Up to the outbreak of the war, or indeed up the end of 1918, the effective weight of local taxation bearing upon agricultural interests had, thanks to the 1896 Act, exceeded by little that of the 'nineties. Of this there is abundant evidence available in the fourth volume of the *Report* of the Royal Commission of 1919, where cost-accounts relating to 325 farms in England, Wales and Scotland are fully dissected and described in the evidence of Mr. H. G. Howell. On the 146,000 acres of this really large sample, rates, including " possibly some Income tax and probably Insurance," averaged 2*s*. 11*d*. per acre, or still only 1·6 per cent. of all outgoings. Other witnesses agreed that the level of rates on agricultural land was about 3*s*. an acre. At this time wages accounted for some 24 per cent. and rent for 10 to 12 per cent. of expenditure, the heading " Purchases " (machinery, live-stock, fertilisers, etc.), as usual, accounting for over half of the farmer's outgoings. Tithe was henceforward stabilised at £109 3*s*. 11*d*., and, in regard to Income tax, the years of prosperity only witnessed a justifiable and brief alteration in the basis of Schedule " B " assessments. Prior to the post-war upheaval it is probable that landlords' burdens represented less than 2*s*. 6*d*. an acre, and those theoretically met by tenants a very similar sum.

During the last few years the customary steps have again been taken, and the Agricultural Rates Act of 1923 has once more halved the contribution of agricultural land, thus, in theory, almost exactly counter-balancing the increase of just under 100 per cent. in the average level of the rates themselves (6*s*. 8¾*d*. in 1913–14 and 13*s*. 5*d*. in 1927–8); as, however, rates in rural districts rose higher, *i.e.* over 130 per cent., than those in urban areas, the effective increase, based on Ministry of Health official figures, lies somewhere between 35 and 40 per cent. Rather more than half of this is apparently due to assessments raised in conformity with the movement of rents, but now lagging behind the latter. Again, by the supplementary Act of 1925, farm buildings have become derated. Under the three Acts in question the Exchequer contributions have been as follows:—1896, £1,320,000; 1923, £2,856,000; 1925, £700,000, making a total of almost £5,000,000, the remaining

body of rate-payers, thanks particularly to the nature of the 1896 grant, being called upon to make good a deficit running into several millions. Such was the extent of the success achieved by agricultural interests, but in this connection the escape from the rating net, in the eighteenth and nineteenth centuries, of other forms of property should be borne in mind. In these circumstances, during the financial year 1927–8, rates levied on agricultural land averaged only 2*s.* 8¼*d.* per acre, or, if we exclude from our calculations the five million acres of "rough grazings," 3*s.* 2½*d.* Expressed alternatively, the contribution in question (£4,132,000) is approximately equal to £10 per "farm" (410,000) in England and Wales, or £13 13*s.* per "farmer" (300,000). This is not a heavy burden, even if met in its entirety by tenants, for, on the majority of farms, rates still represent less than 2 per cent. of outgoings. In this connection, compare the component costs entailed in the production of an acre of cereals—*e.g.* 35*s.* to 40*s.* for labour, and an average of 31*s.* for rent.

The effective trend of legislation and of economic circumstances is well revealed by placing in juxtaposition with the examples previously quoted the 1926 data relating to a number of East Anglian holdings.

DISTRIBUTION OF OUTGOINGS.

	1884–93. 5 farms.	1919. 325 farms.	1926. 13 farms.
Live-stock, feeding stuffs, machinery and manures	52·1	51·0	43·6
Labour	20·5	24·0	28·9
Rent	17·3	10·0	11·6
Rates	1·8	1·6	1·6
Other Expenses	8·3	13·4	14·3

A recent White Paper affords the interesting information that the contribution to local rates by "agricultural land" in 1927–8 formed merely 2·4 per cent. of the total payments from all classes of property. Bearing in mind the capital sums represented, compare figures of 2·8 by gas and electricity undertakings, 2·2 per cent. by warehouses, and 2·6 by licenced houses. The Census of Production gave the value of the output of all such land (including rough grazings) in England and Wales in 1925 at £225,000,000, or £8 10*s.* per acre. Once again, local taxation, even if wholly remaining with the tenant-farmer, represents only 1·58 per cent.—not an important element in the cost of production.

In October next the remaining rates on agricultural land

(amounting in England and Wales to £4,132,000) are to disappear, as part of a comprehensive scheme for relieving "productive" industries which will involve the reorganisation of our system of Local Government. Great expectations have been attached to the proposal, but it is difficult to endorse the findings of *The Times* leader-writer, who stated that—"If the farmer can only contrive to carry on for the next eighteen months, then there is a real hope that the large constructive policy set out in the Budget may bring back into cultivation land that has been left to run wild, bring tenants to farms that are now unoccupied—is this the process that is known as a 'dole to the landlord'?—and give British agriculture a new lease of life." There inevitably recur these words of the late Professor Nicholson:—"If we take the *Reports* of the last two Commissions on agricultural depression, we find that the main causes are, in the first period, bad seasons, and in the second, low prices. The precise influence of rates and taxes, even if considerable, would be overshadowed by these greater causes." This explanation, indeed, holds true with still greater force in the case of the third depression through which the industry has just passed, or is still passing. Incidentally, matters are not so bad as the leader-writer imagines (the conditions he describes are a century old); on the other hand, the reliefs to which he refers so hopefully are of far less magnitude than he postulates. A remission of two or three shillings an acre cannot bring about an agricultural millennium.

Two or three factors call for brief comment. It is often stated that landlords will ultimately reap the benefit of this policy. Without entering into a full discussion of the prevalence of economic rents or of the distribution of the two sets of profits concerned, it may be pointed out that (*a*) there is a little evidence that rents were raised shortly after 1896 or 1923, but (*b*) that lengthy tenancies, had they still been commonly in vogue, would have secured to the occupier the clear reduction which in theory annual leases fail to accomplish. Again, it is inevitable that relief should be accorded without regard to comparative needs, and the successful market-gardener, the fruit-grower, and the fen farmer may secure benefits greater than those granted the light-land farmer and the struggling producer of wheat on the heavy clays. It has been suggested, in general, that the grass-land farmer stands to gain most, as, owing to his smaller wages bill, rates should form a larger proportion of his outgoings. Close investigation, however, indicates that there is little foundation for this belief.

The objection of the Departmental Committee on Local Taxation to the "unduly heavy burden" caused by the large amount of rateable property in proportion to the "general ability" of farmers will henceforward have no force, and any suggestion for the remission of local rates on farm dwelling-houses will rightly meet with strong opposition, for such contributions, together with those on farm cottages, will in future represent the only payments made by agriculturists for local purposes. A few months hence farm-land will have been relieved of total payments equivalent to over 12*s*. per acre per annum (about £40 per "farm" and over £50 per "farmer"); more than half (£9,000,000) of this will have come from the pockets of the tax-payer, the remainder (about £7,000,000) from increased payments by non-agricultural rate-payers. If the latest instalments of the reliefs are, to the farmer, relatively unimportant, the principle at stake, on the grounds of equity, has, for over thirty years, affected the whole community.

Tithe, now regarded as a reserved rent-charge, for centuries deriving its sanction from custom and not from Statute, has always proved a thorn in the side of the agriculturist. Placed on a money basis in 1836, and made a legal charge against the land-owner in 1891, its level from the former date until 1917 varied with that of the three principal cereals. Despite the fact that in times of depression it automatically fell, and actually remained below par from 1883 to 1916, its incidence was always stressed by witnesses before the Commissions. In 1914 payments amounted to £2,795,000, and represented 1*s*. 9¾*d*. (or, on the alternative acreage basis, 2*s*. 0¾*d*.) per acre. While it is admittedly capricious, and, in reality, reflects the economy and cropping of 1836, its present weight (£3,396,750, exclusive of sinking fund contributions) is not crushing, amounting to 2*s*. 2½*d*. (or 2*s*. 6*d*.) per acre, £8 per "farm" or £10 17*s*. per "farmer." Instances of tithe ranging up to 10*s*. per acre are met with, and, in such circumstances, it can represent the heaviest "burden" on the landlord or on the occupying owner. If redeemed tithe is to be regarded as still effective, then an addition of 7½*d*. per acre must be made to the figures just quoted.

Legislation, hastily passed, limited the rise in tithe in the boom years to £109 3*s*. 11*d*., subsequently modified to £105, plus a sinking fund of £4 10*s*. per annum, which, in some eighty odd years, will effect the termination of the charge. An increase between 1914 and the present time of only 21 per cent. in the gross weight would normally be defensible on economic grounds, but

the arbitrary nature of the charge causes any increase to be the signal for political and religious recriminations which have generally confused the issue. From the economist's standpoint the only drawback to the final settlement is the uncertainty attaching to future money values—what, for instance, will £105 represent in 1940, 1960 or 1980?

Land tax, a really small charge, bringing in nowadays only £600,000 per annum, the whole of which, for the purpose of this inquiry, must be assumed to come exclusively from the owners of *agricultural* land, has, of the four burdens, the least satisfactory foundation. It reflects, indeed, the political complexion of the country in the year 1692, and its weight is greatest in the home counties, and in precisely those districts where arable farming is most liable to depression. Averaged on the customary basis, it represents a charge of 4½*d*. (or 5½*d*.) per acre, £1 9*s*. 3*d*. per "farm," and £2 per "farmer." In rate of assessment it cannot exceed 1*s*. in the pound, and, on genuine farm land, as opposed to real property "in process of development," its weight, even in the eastern counties, is never serious. The Commissioners held that this charge, originally imposed on all forms of property and incomes, and subsequently shifted on to one particular type, was not only a tax—thus refusing to affirm that "old taxes are no taxes"—but that the system under which it was levied made it more unequal in incidence. The majority of authorities, indeed, hold that redeemed Land tax is still to be regarded as a charge on the property concerned; in this event, its weight should perhaps be doubled. Even the method of its collection is open to criticism, for an undue proportion of the proceeds are swallowed up in the process. Its abolition, which would represent a small loss to the Exchequer, is always violently opposed by those who have themselves carried out redemption, and it would seem that as a charge it must still remain subject to slow attrition.

In discussing the incidence of Income tax it must again be emphasised that the receiver of rents is not included in this review. Thanks to his forbear's skilful action, entailing alleged illiteracy and complete ignorance of book-keeping principles, the present-day tenant has had conferred upon him the far-reaching and unique privilege of being assessed either upon his rent or upon his profits. Naturally the overwhelming majority have elected to come under the former system, viz. Schedule "B," the number assessed under Schedule "D" ranging between 200 and 2,700 out of a total of 300,000. Unfortunately, information is almost completely lacking in regard to the net payments under the two

Schedules in question, but if it is appreciated that the average size of a farm is but little over 60 acres in extent, that each "farmer" is only responsible for some 80 acres, and that the average rental of this land is 31*s.* per acre, then it is clear that, with the existing method of deductions and allowances, every married man farming land up to about 150 acres is totally exempt, and that possession of even a small family carries exemption up to 300 acres. As a matter of fact, less than one farm in eight exceeds 150 acres in area. The contributions, therefore, under Schedule "B," which, some twenty years ago (a period when figures were available), produced £203,000, must still be extremely meagre. During the war years the 2,000 persons electing to be assessed under Schedule "D" revealed an average profit of a little over £300 per annum, or half what they would have been assessed upon under "B." The only composite estimate of the contribution of farming profits is represented by an unofficial statement made to the Colwyn Committee, which placed the figure at £1,500,000 in 1922–3—this, in an admittedly bad year, is equivalent to £5 per "farmer." Practising agriculturists are too apt to claim that Income tax is an element in the cost of production, and when analysing financially their operations have been known to add 10*s.* an acre to each crop, on the ground that tax paid on other sources of income should be debited to these products as forming an essential part of their cost.

Much can be urged against the retention of Schedule "B"; thus, parts of the country produce examples of heavy profits made on small areas of land (£5,000 has been cleared on a farm of 200 acres producing carrots and onions), and the spread of education has made it possible for all tenants to complete the requirements of Schedule "D." Whatever may be the position of the owner of large tracts of agricultural land, neither the tenant farmer nor the occupying-owner of less than 500 acres is entitled to regard Income tax as a "burden."

It now becomes possible to compare the combined weight of taxation before and after the war:—

Acres of crops, grass and rough grazings.		Per acre.			Total.	Total Sum.
		Rates.	Tithe.	Land Tax.		
1914	30,896,000	1*s.* 11¼*d.* (£3,000,000)	1*s.* 9¾*d.* (£2,795,000)	5*d.* (£640,000)	4*s.* 2*d.*	£6,435,000
1927	30,716,000	2*s.* 8¼*d.* (£4,132,000)	2*s.* 2½*d.* (£3,397,000)	4½*d.* (£600,000)	5*s.* 3¼*d.*	£8,129,000
Increase . .		38·7%	21·8%	—10·0%	26·5%	26·3%

The increase in the standard rate of Income tax is, of course, 140. Tithe and Land tax redeemed subsequent to 1914 are excluded from this review, but their inclusion would not materially affect the figures, all of which have been derived either from the official publications of the Departments concerned or from specific information. It must be generally agreed that a net increase of 26 per cent. at a time when every other industry and individual had been called upon to face much heavier increments does not afford grounds for serious complaint.

This raises the question of the allocation of the three outgoings in the above table as between landlord and tenant. In 1914 the two charges falling upon the former were 2*s*. $2\frac{3}{4}$*d*.; they are now 2*s*. 7*d*., an increase of 16 per cent., or considerably less than the (temporary) augmentation in tenant's contributions. While it is significant that the bulk of the agitation for the remission of rates has emanated from tenants, and tithe increases have been opposed by landlords, the latter have, in the upshot, secured smaller concessions, for, on the complete derating of land, when the total payments per acre will be reduced by rather more than half, those remaining will comprise owner's burdens. While these charges now only amount on the average to 8·3 per cent. of rentals, any fall in the rents themselves will appear to add to their weight. The aggregate of the three principal charges will, however, in future certainly be lower than it has been since the end of the eighteenth century. If no concessions had been granted agriculturists during the last forty years the incidence of rates and tithe would have been crushing, and, collectively, the charges would have made the position of the tenant difficult, that of the landlord almost impossible. As matters are, the combined charges even now represent less than 4*s*. in the pound on the gross rents.

The present position of the tenant in relation to his outgoings, taking 1914 as the basic year, is as follows :—rents, after having been increased by at most 15 to 20 per cent., have in all probability reverted to the 1914 level; labour has been augmented by at least 90 per cent.; purchases range from a decline of 30 per cent. (in the case of certain fertilisers) up to an increase of 70 per cent.; rates, forming less than 2 per cent. of the total, have increased by 38 per cent. The General Index-number applicable to his receipts fluctuates between 40 and 50 per cent. above this base.

It is invariably a source of surprise to English agriculturists to find that the level of taxation in other countries may be higher than in their own. Thus, in the Old World, the much-quoted

Danish farmer contributes to taxation in accordance with the fertility of the soil he uses—the equivalent of 15*s*. per acre is reported to be a common figure on medium-sized farms, and examples of £1 are not unknown. Income tax is levied on a sliding scale, which extends sufficiently far down to touch the smallest proprietor.

In the New World, taking Canada as an example, rates range from 10 cents per acre, on prairie farms, up to 1 dollar 50 cents on suburban holdings; in such provinces as Ontario the average would appear to be in the neighbourhood of 70 cents—say 3*s*. —proportionately a far heavier burden than the very similar sum now levied on English farmland, where the outgoings per acre are approximately double those in Canada. Even the substitution of "fair values" for a flat rate system, which operates in favour of rural districts, seems not to have reduced taxation to the level which it is assumed by many persons on this side of the Atlantic to occupy.

Much light would be thrown on the whole question by a world survey of the incidence, or the effects, of taxation upon agriculturists. This, surely, is a question for the International Agricultural Institute at Rome, whose functions are economic as well as statistical. That body will, in the course of the next two years, be conducting a world census of agricultural production, to embrace also the social aspects of the industry. What a remarkable opportunity is thus presented for an investigation of the comparative economic and fiscal position occupied by agriculturists in relation to their States, and the efficacy of different methods of taxing both the owner of real property and the cultivator of the soil.

To sum up the situation in this country. The English tenant-farmer and the occupying-owner of nine out of ten farms do not now suffer, and have not for the last eighty years, suffered under heavy taxation. Psychology, conservatism, ignorance of history and lack of knowledge concerning the contributions made by other groups of individuals are together responsible for a widespread belief that the agriculturist is subjected to excessive taxation. On the other hand, the contributions taken from the owners of considerable properties in the form, not only of annual contributions, but of Death duties, swallow up a large proportion of the gross rents received by a numerically small body. The economic tendency which leads to the shifting of burdens from the one class to the other has been encouraged by legislation. While there may be more equitable and more effective methods of taxing

practising agriculturists, there is, certainly, little opportunity, or need, for further reduction in the existing forms, except possibly in one or two minor directions. Land tax should either be abolished or amalgamated with other forms of taxation, and Schedule " B " of the Income tax, as an option, should be withdrawn; the incidence of Death duties on real estates might receive further sympathetic consideration.

After all, the passage of an extremely brief period in the life-history of English agriculture has resulted in remarkable changes. It has witnessed the disappearance of many anomalies, and it has revealed the land as possessing great recuperative powers; it has seen the defeat of the Physiocrats and of their successors; it has witnessed, not only the reversal of a tendency for taxation and rating to fall disproportionately on one particular class of property, but the progressive alleviation of charges deeply rooted in custom and tradition—it has even seen the roots themselves torn up; despite the prophecies and fears expressed before numerous Commissions, the resulting transference of millions of pounds has been successfully accomplished. The final stages of the process, originally brought about by rural agitation, involve the reconstruction of the British system of Local Government, the wholesale re-assessment of properties and the recasting of the relationship between the Central Government and subordinate authorities. The dispassionate historian, looking back at the past century, sees the grandfather of the present farmer, in addition to meeting in their entirety the present-day emasculated " burdens," taxed upon his riding horse, on his working horses, on his carts, on his gig, on the malt he produced, and on the windows of his house. But, in commenting on the extent of the grandson's victory, he cannot fail to express surprise at the calm attitude with which all the reliefs and grants have been accepted. Whilst struggling for reduction of taxation, three different generations of English farmers have passed through periods of depression, surmounting on each occasion economic disabilities far greater than those associated with their statutory charges. If they have preferred to concentrate upon the task of securing remission here, rather than elsewhere, who shall criticise their policy? Now that this particular campaign has drawn to a successful conclusion, however, may there not be anticipated an assault by them and their advisers upon the other, and far larger, sources of expenditure, involving eventually a drastic reorganisation from within? What discoveries may not be in store for those, for example, who study the economics of the application of labour and of the utilisation of

machinery or who investigate methods of marketing? An age-long agitation, of minor economic import, but crossed by political, social and even religious issues, has drawn to a conclusion. The ground is clear for concentration upon the major problems of agriculture.

J. A. VENN

A CENTRAL BANK FOR INDIA

I

THE object of this paper is in the first place to trace in the briefest possible manner the history of the proposal of a Central Bank for India; secondly, to examine the reasons why the Reserve Bank Bill recently did not pass into law, and thirdly, to review the principles underlying the proposed Bill. It may be sometimes necessary to make a long ramble through rough country. We make no claim to cover all the details, as this would terrify and bewilder the inquirer and distract one from the broad facts that have to be understood. The charter of the Imperial Bank of India expires in 1931, and when the question of the renewal of the charter of the Imperial Bank is considered at the close of 1929 or in 1930, the Central Bank question may be reopened.

The proposal of a Central Bank for India is a very old one. A Central Bank, of course, after the war means a different thing, as we shall see, from what it did before the war, and far more so than it was conceived in the earlier part of last century. In 1836 a proposal was put forward for a " great banking establishment for British India " to " facilitate the receipt of the revenue and its subsequent diffusion through the various channels of the public expenditure, furnish the remittance to Great Britain of the sums required there for the home charges, and enable the East India Company to act up to the intention of the Legislature by keeping their Government entirely aloof from that interference with the commerce of India which the present system of remittance involves." [1] The greatest of India's Finance Ministers, James Wilson, the father-in-law of Bagehot and the founder of the *Economist*, spoke in the Legislature in 1859 of " a national banking establishment, capable of gradually embracing the great banking operations in India, and of extending its branches to the interior trading cities as opportunity might offer." His successor, Mr. Laing, saw that the advantage of such a bank was obvious, and believed " history shows what an important resource a bank may be to the Government in times of difficulty. The advantages to commerce, though less obvious, are not less real." In 1870 a

[1] My *Indian Finance and Banking* (Macmillan & Co.), pp. 350 ff.

member of the Viceroy's Cabinet, Mr. Ellis, minuted that "The change which I advocate as the best is the establishment of one State Bank for India. . . . I believe the Bank of France would furnish a model which, with suitable modifications, might be adopted for India." From this time until 1899, when the Fowler Committee on Indian Currency reported, the question was more or less lost sight of. The vagaries of silver were indeed a far more pressing question than the creation of a strong Central Bank. Sir Everard Hambro, one of that Committee, emphasised, as indeed did the witness, Mr. Alfred de Rothschild, the advantages of a strong Central Bank in assisting currency policy and also in developing the banking resources of India. Unfortunately provincial jealousies were too great to enable this proposal to be carried out, and in 1901 the Government of India and the Secretary of State decided to abandon the scheme for the establishment of a Central Bank for India which from 1899 to 1901 had been under discussion. "You have come," wrote the Secretary of State in a despatch dated 26 July 1901, "reluctantly to the conclusion that the circumstances are unfavourable to the policy of pressing on the Centralisation Scheme at the present time. This opinion I consider myself bound to accept; but I agree with your Excellency that it will be distinctly advisable, as soon as may be practicable, to establish a Central Bank in India, for the reasons given in your letter and in Sir Edward Law's able minute; and I request that this object may be kept in view, and that the scheme may be revived whenever there is a possibility of its being successfully carried out." [1] The Royal Commission on Indian Finance and Currency, 1913, usually known as the Chamberlain Commission, considered the question. They had before them two Memoranda, one from the pen of the most brilliant financier that the India Office has perhaps known for half a century, Sir Lionel Abrahams, and the other by Mr. J. M. Keynes. The Commission did not report either for or against the establishment of a Central Bank, but suggested the appointment of a small expert Committee to examine the whole question, and either to pronounce against the proposal or to work out in full detail a concrete scheme capable of immediate adoption.

The memorandum by Mr. Keynes merits special attention, because it anticipates part of the Hilton Young Commission on Indian Currency and Finance, 1926. Mr. Keynes outlines a

[1] Quoted in Sir Lionel Abraham's "Memorandum on Proposals for the establishment of a State Bank for India," App. XIV, p. 339, Chamberlain Commission, 1913.

constitution and deals with the capitalisation of the Bank, the division of profits, the regulation of the note issue, and other functions of such a bank. "The undesirable features in the Government's present degree of responsibility . . . are . . . due to the lack of a suitable machinery. . . . The business is of a kind where immediate action and undivided responsibility in regard to details is essential, whereas, if it is dealt with in the ordinary mills of Government, this is nearly impossible. . . . Banking business must be outside the regular Government machine, ignorant of 'proper channels,' and free of the official hierarchy where action cannot be taken until reference has been made to a higher authority. . . . The presence of private capital is probably a considerable bulwark against some kinds of political pressure. Continental experience shows that private ownership of the Bank's capital, even although the shareholders have no more than advisory powers, is an important safeguard of the Bank's independence; and continental writers have laid great stress on this."

The war showed the advantages of amalgamation of the three Presidency Banks. After the armistice the question was discussed informally between the Government and the banks. An Act was passed by the Indian Legislature in September 1920 providing for the amalgamation, and the Act took effect from 27 January 1921. The amalgamated bank is not a Central Bank performing the functions of a Central Bank in regard to the note issue. Its traditions are those of the three Presidency Banks, its present make-up and general business being those of a Joint Stock Bank. India requires to-day in her banking system two essentials—one a strong Central Bank in whose hands the control of currency and discount policy and responsibility for both banking and currency reserves will be undivided, and secondly the development of banking facilities with branches and agencies up and down the country-side. The Hilton Young Commission came to the conclusion that one institution in India could not fulfil both these demands. It would not be fair to other banks to give one bank, such as the Imperial Bank of India, a monopoly in this respect, nor would it be fair to expect the member banks (which are to be compelled to keep a part of their reserves with the Central Bank) to agree to a Central Bank which should compete with them in exchange and possess the monopoly of the note issue as well as the use of the balances of Government. Notwithstanding the presence on the Hilton Young Commission of one of the Governors (Sir Norcot Warren) and four other members closely connected with the direction of the Imperial Bank, the

Hilton Young Commission decided—it is believed with reluctance—that the Central Bank could never be the Imperial Bank. They were faced with the alternative of leaving the control where it is now, divided between the Secretary of State, the Government of India and the Imperial Bank, or of recommending an entirely new bank, a bank working in an atmosphere no longer Governmental but representative of the commerce and industry, including agriculture, of the country. The Imperial Bank could not be entrusted with Central banking functions unless its activities were limited purely to the field of Central banking. By the conversion of the Imperial Bank of India into a Central Bank, said the Commission of 1926, "The country would then lose the benefit of the elaborate and widespread organisation which has been set up, through the length and breadth of India, to make available to the community the increased commercial banking facilities, which are so urgently needed, and to assist in fostering, among the people as a whole, the habit of banking and investment." [1]

It will be remembered that the International Financial Conference which met at Brussels in 1920 recommended that "in countries where there is no Central Bank of issue, one should be established." The second Resolution on currency of the International Economic Conference which met at Genoa in 1922 was to the same effect, and it also recommended that banks, and especially banks of issue, should be free from political pressure. Indian finance between 1922 and 1928 showed the necessity and the overwhelming advantages of a more unified system of banking. The absence of real and unified control over credit makes the maintenance of monetary stability very difficult and often uncertain. The growth of confidence is impeded. Confidence in the Joint Stock Bank makes for progress, and confidence means that the banks in times of stress are able to turn the maximum of their assets into cash. Our experience has been that when stringency takes place, distrust is also apt to take place, and distrust means that people and banks cling to cash, so that a crisis is, under a system of decentralised banking such as obtains in India at the present time, unavoidable. Ask any Joint Stock banker in this country to-day outside the Imperial Bank of India where lies the weak spot of Indian banking. He will point out the absence of adequate rediscount facilities which makes the position of Indian banks sometimes very precarious. Indian Joint Stock Banks must earn dividends and at the same time keep high cash reserves in case of necessity. With a Central reserve, a developed

[1] Para. 87, p. 35. Report (Cmd. 2687: 1926).

rediscount market and an elastic currency there would be strength in our banking system. Indeed, a Central Bank alone can adequately extend in times of stress credit to all who produce securities that represent credits to solvent people in regard to true commercial transactions. We have to remember that especially in this country, where the population is illiterate and banking undeveloped, the development of Joint Stock banking cannot proceed safely without a Central Bank. It sometimes appears to be doubtful to some (for example, to Mr. Gubbay, General Manager of the P. & O. Banking Corporation, in his interesting paper on "Indigenous Indian Banking" read before the Royal Society of Arts in November 1927) how a Central banking system such as recommended by the Hilton Young Commission can be superimposed on the existing indigenous banking system. It may be argued that (1) the absence in indigenous banking of securities acceptable to a Joint Stock Bank or the Reserve Bank, and (2) the difficulty of establishing contacts between the Indian trader and the Joint Stock Bank stand in the way of bringing the indigenous banking system within the system under control of the Reserve Bank. There appears to be much truth in what Sir Henry Strakosch said, that it is not necessary for a bill of exchange to be eligible for discount that it should be supported by documents as in the case of overseas bills drawn on London, where documents are released only when the bill is accepted. Domestic bills in Great Britain, America and the Continent are usually unaccompanied by supporting documents, and they are accepted for discount at the Joint Stock Banks and for rediscount at the Central Bank. When the Indian trader finds a bill representing an exchange of goods commands a readier market than at present he will conform to the requirements of the banker. Indeed the hundi may become standardised. In the Shroff (or Indian banker) and the smaller Indian banker we have a nucleus of bill brokers or a money market in India. If the Shroff is certain that the Joint Stock Banks will always advance money on or discount true commercial bills by reason of the fact that the Reserve Bank will rediscount them when required, the Shroff will go to the Joint Stock Bank rather than pay high rates for deposits in the bazaar. Bills not eligible for discount will still, as in other countries, go to the bazaar and be subject to "bazaar" rates.[1]

The Hilton Young Commission then recommended the establishment of an entirely new Reserve Bank which should confine its activities to Central banking functions. It was to be a

[1] Cf. *Journal of the Royal Society of Arts*, December 1927.

banker's bank and a banker to the federal and provincial governments in India. It was to have the monopoly of note issue subject to statutory regulations in regard to reserves. It was to build up gold reserves adequate for emergencies and to manage rupee reserves in a way to give elasticity combined with complete security. It was not to do commercial banking business. It was to be a shareholders' bank and free from governmental control. The Commission, through its own members, especially Sir Henry Strakosch and the Chairman, the Rt. Hon. Sir Hilton Young, or through witnesses, was in close touch with recent experience in Central banking, notably that of the Federal Reserve System of the U.S.A., the Reserve Bank of South Africa, and of the older and newer Central Banks of Europe. The Finance Minister, Sir Basil Blackett, was Secretary to the Royal Commission on Indian Finance and Currency, 1913, and was intimately connected with the drawing up of the Financial Resolutions at Genoa. When he came to India in 1922 for five years as Finance Minister from the Controllership of Finance at H.M. Treasury, his experience in this direction was bound to be of value. Economists and informed opinion emphasised the need of a better banking system, especially after the publication of the Report of the Royal Commission in 1926. The creation of a Central Bank was necessary, although it must needs be adapted to Indian conditions, and as Indian as the Taj at Agra or the Kutab at Delhi. Both the Secretary of State for India and the Government of India accepted the main recommendations, including those relating to the creation of a Central Bank. A bill embodying the recommendations of the Royal Commission, in so far as these related to the gold (bullion) standard and the creation of a Central Bank, was published on the 13th January 1927, and introduced in the Legislative Assembly on the 25th January.

II

The Bill was entitled " A Bill to establish a gold standard currency for British India and constitute a Reserve Bank of India." The Bill attempted to put an end to the present system by which the Government exercised direct control over currency in general and over the note issue in particular. It aimed at concentrating the banking and currency reserves in a Central Bank. At present credit, so far as it is controlled at all, is, as we have seen, controlled by the Imperial Bank, while the Government controls the currency, and this divided control means divided counsels and failure to co-ordinate. The first draft Bill provided that—

(1) The capital should be a share capital of fifty million rupees, divided into shares of five hundred rupees each, and the Imperial Bank of India should be given the option of subscribing three-tenths, and the remainder, together with any shares not taken up by the Imperial Bank of India, should be subscribed by the general public (Clause 4).

(2) " Save as expressly provided in this Act, no person may be a Director who is an officer of Government or a member of the Indian or a local Legislature, or is a director, officer or employee of any other bank " (Clause 8).

(3) The Directorate should consist of fifteen members—a Governor and a Deputy Governor appointed by the Governor-General in Council; nine Directors elected by shareholders (of whom two to represent business interests in Calcutta, two in Bombay, one in Madras, and two business interests in British India exclusive of Calcutta, Bombay and Madras); three Directors nominated by the Governor-General in Council to represent commerce, industry and agriculture; and an officer of Government appointed by the Governor-General who, however, could not vote (Clause 9).

It was over these clauses that the battles in the Legislature were to be fought. The Bill differed in a few respects from the Report of the Commission. The chief differences are these :

(*a*) The Commission recommended that the Imperial Bank's shareholders should be given the first opportunity of subscribing for the capital of the Bank as consideration for foregoing important privileges which the Imperial Bank now enjoys. The Bill gave the Imperial Bank as an institution, and not to its individual holders, the option of subscribing 30 per cent. of its capital, and it left to the Bank to distribute the allotment among its shareholders, if it so desired.

(*b*) The Commission recommended the creation of Local Boards in Bombay, Calcutta and Madras, and representatives from these should constitute a majority on the Central Board. The Bill dispensed with Local Boards, but it gave power to the Reserve Bank to establish such Local Boards, if considered necessary later on, and to delegate to them such powers and functions as were desirable. The Bill proposed, too, that nominated directors should be appointed for three years, and not one year as suggested by the Commission.

(*c*) The Commission did not provide for the Reserve Bank's

receiving non-interest-bearing deposits from private persons. The Bill followed the practice provided in the large majority of Central Bank charters, of permitting deposits to be received from private persons, provided no interest was paid.[1]

(*d*) The Bill reduced the minimum cash balances to be maintained by banks with the Reserve Bank from 10 per cent. to 7½ per cent. in the case of demand liabilities, and from 3 per cent. to 2½ per cent. in the case of time liabilities.

(*e*) While the Commission recommended that the paid-up capital and reserve may be invested in securities of the Government of India having not more than five years to run, the Bill modifies this provision to cover Government of India securities of any maturity. The Government of India are funding their short-term indebtedness into long-term indebtedness.

(*f*) The Bill proposed that for five years the Bank should be authorised to advance money against promissory notes of scheduled banks under certain conditions. In this country the financing of industry and the movement of crops are carried on by cash credits and it would have been difficult for the Reserve Bank to assist other banks in providing credit without some such provision or alternatively considerable changes in banking methods.

Space will not permit to discuss certain other differences between the Commission's Report and the Bill in regard mainly to details regarding the issue of notes, outstanding notes, the limit of securities in the Banking Department of the Reserve Bank, and the selling of gold during the interim or transition period. It will be sufficient if we point out the importance, even at this period, in the history of the Bill assigned to the capital and directorate of the Bank. The differences between the Report of the Royal Commission and the Bill brought these prominently into relief. The ratio question, viz. the fixing of the rupee at one shilling and six pence gold, provoked much controversy, but this was settled by the passing of Act IV of 1927. It was unfortunate that the Finance Member did not press for the passing of this Bill at the same time. No doubt he was anxious to secure as much

[1] The only important exceptions are the Banks of Australia (not a real Central Bank), Belgium, Italy, Poland, Hungary, Austria, Denmark and Latvia, and, also of course, the State banks. Even in the case of the former banks there are certain restrictions. In Italy and Poland, for example, interest-bearing deposits may be accepted with the approval of the Minister of Finance (Art. 36 and Art. 69 of the charters respectively). In the Banks of Australia and Belgium Savings Bank business is transacted (Art. 35 and Art. 33).

unanimity as was possible. It was, however, his critics allege, a blunder, as it gave time to his political enemies, especially in Bombay, to marshal their forces and to retaliate for the passing of the Ratio Bill. The Government agreed to defer discussion of the Bill till a later session and to the appointment of a large Select Committee.

The result of this first alleged error in tactics by Sir Basil Blackett in not pushing through at one session all the Bills covering the recommendations of the Hilton Young Commission was soon evident. The history of the second and third draft Bills is little more than the history of the clauses dealing with the capital of the Bank and the composition of the Directorate. The Select Committee, consisting of twenty-five members, met in Bombay at the end of May and again in Calcutta towards the end of July 1927. Clauses 4, 8 and 9 were altered beyond recognition, and there were no fewer than thirteen minutes of dissent. The majority of the Committee was of opinion that the Bank should be a State Bank, the Government of India subscribing all the capital, because the Bank if managed by a body responsible only to a number of private shareholders tended in their opinion "to be controlled by vested interests, and would, therefore, fail to secure the confidence of the Indian public; and its utility to the public might even be endangered by a conflict of interest within the management of the Bank between Indian and external capital." The majority also added that in their opinion "Joint Stock principles are not suitable in the case of a Central Bank, the management of which should be carried on with an eye more to the public interest than to the accumulation of profits for shareholders." Sir Basil Blackett and six other members in a minute of dissent pointed out, "If the whole of the capital of the Bank is subscribed by the Government, it becomes very difficult to ensure that complete independence for the Bank which is essential to its proper working." They also were convinced that the device of private share capital which has worked well in other countries is the best method of serving India in this connection. The Select Committee in the majority report deleted the clause prohibiting members of the Central and Local Legislatures from being nominated or elected to the Directorate. Sir Basil Blackett and his dissenting colleagues in their joint minute of dissent regarded it as fundamental that the Directors must be chosen by constituencies independent of the State, and the constitutional functions of the Legislature do not and ought not to extend to the exercise of executive functions, such as the appointment of persons to

specific posts. Business men on the Select Committee, like Sir J. W. A. Bell of the Bengal Chamber of Commerce and Mr. Kikabhai Premchand of Bombay, believed in regard to the capital and directorate of the Bank that anything in the nature of political control of, or interference with, a Reserve Bank would be disastrous. A shareholders' bank would have Directors elected not on account of their political views, but mainly on account of their business acumen, an important fact in the case of a bank which is a bankers' bank.

On 29th August the Bill as modified was introduced by Sir Basil Blackett into the Indian Legislative Assembly. He emphasised there was practical unanimity in the Select Committee on a large extent of the ground covered by the Bill, especially as to the functions of the Bank. The difference of opinion was with regard to the capital and directorate. By his renunciation of a bank with share capital Sir Basil Blackett, it is said, delivered himself into the hands of his political enemies. On 30th August, led by considerations of expediency, he tried to reach a compromise agreeable to all parties. He dropped the shareholders' scheme and also consented to a scheme of an electoral college for the election of Directors. Successive schemes day after day were put forward at conferences during the session of the Assembly, and at last there was the proposal of a stockholders' bank. The stock was to be sold by Government, and each holder of this Government stock to the value of Rs. 100 or more was entitled to one vote in the setting up of boards of trustees for the election of Directors. Members of the Council of State and the Legislative Assembly were given the right to sit on the boards of trustees without the stock qualification. At this stage the Secretary of State for India cabled from London and put his foot down firmly on the negotiations proceeding among the various groups in the Assembly. The Finance Member stated in the Legislative Assembly on 8th September 1927, that the Government had decided not to proceed with the further consideration of the Bill during that session. The Secretary of State had behind him the authority of the most influential financial bodies in the world—the Brussels and Genoa Conferences of international experts. It was clear that the finance and currency of India were more secure under Government control than they would be under that of party politicians. It never pays, Sir Basil's critics say, in finance to sacrifice sound policy to placate left wings of nationalism. The conditions of the Secretary of State cannot truthfully be called either unreasonable or onerous. That there shall be no

direct political representation on the directorate nor any possibility of political control over the internal affairs of a Central Bank are principles of almost universal acceptance to-day.

Sir Basil Blackett tendered his resignation, which was refused, and a *communiqué* dated 27th October was issued from Simla to the effect that Sir Basil Blackett was proceeding on special duty to England on 29th October " for the purpose of discussing with the Secretary of State the details of a plan for the constitution of the Reserve Bank on the basis of share capital." Sir Basil Blackett returned to India before Christmas and a third Bill was published on 11th January 1928.

This third Bill was never discussed by the Legislative Assembly, as the President, when the Bill was reached, declined to call on Sir Basil Blackett to introduce the Bill. Several members of the parties on the left objected that the Rules and Standing Orders prevented the Government from proceeding with the Bill while the first Bill was still alive. The President upheld this view and affirmed that the method of procedure proposed by Sir Basil Blackett violated the proprieties of the House and was an abuse of its proper procedure. The Government were taken completely by surprise (1st February) but on 3rd February it was announced that the old Reserve Bank Bill (the second Bill) would be considered. It was hoped to alter the Bill in its passage through the Assembly and the Council of State so that it should conform to the third Bill. When Clause 8, which provides for the appointment of Directors, was reached in the Assembly and the division was taken that Clause 8 as amended stand part of the Bill, the Government were defeated by one vote. Sir Basil Blackett then rose and said that the Government would proceed no further with the Bill until it had time to consider whether the House really wanted any legislation at all for a Reserve Bank. Clearly the decision to omit Clause 8 was a wrecking amendment. On 10th February Sir Basil announced that the Government saw no sufficient reason for pressing their view on the House, and they would presume that the House preferred to continue the existing currency system and the machinery and method of control of Indian currency and credit. " In the absence of a more effective public demand for a change, the Government do not now propose, themselves, to take any further steps with a view to the introduction of the reform which the Reserve Bank Bill was designed to bring about. The Bill is, of course, still before the House, but in the absence of any easy means, by which we can usefully continue our consideration of the remaining clauses, I would suggest that the debate should be

adjourned." The consideration of the Bill was adjourned *sine die* on the 10th February 1928. Two Sessions must elapse before a similar Bill can be introduced. The intermission, however, will certainly be much longer. When the discussion is resumed it will, it is hoped, be under calmer political skies and less bitter recollections of the ratio controversy.

The third Bill [1] is not without interest. The original provision of share capital of Rs. 50 millions was retained, but the shares were to be of the value of Rs. 100 in place of Rs. 500. These shares were to be distributed on a territorial basis and on conditions ensuring wide distribution. No person, firm or corporation was to be allowed a holding in excess of Rs. 20,000, whether partly in his own right or partly or jointly with others. The places of registers, the amount of share capital allotted and the areas they are to serve were as follows:—The Bombay register, which included the Presidency of Bombay with Sind and the Central Provinces, Rs. 150 lakhs; [2] the Calcutta register, which included the Presidency of Bengal and the Provinces of Bihar and Orissa and Assam, Rs. 150 lakhs; the Madras register, which included the Presidency of Madras and the Province of Coorg, Rs. 40 lakhs; the Rangoon register, which included the Province of Burma, the Andaman and Nicobar Islands, Rs. 40 lakhs; and the Delhi register, which included the territories of Indian princes and other parts of India, Rs. 120 lakhs. If in any one register the shares were not taken up, the Board could transfer a portion of such shares to another register with the previous sanction of the Government. The Board of Directors, also with the previous sanction of Government, could increase or reduce the share capital, but every increase was to be fully paid up.

The Directorate was to have consisted of twenty-four persons as follows:

1 Governor
2 Deputy Governors } to be appointed by Government.
4 Directors nominated by Government.
2 elected by the Associated Chambers of Commerce.
2 elected by the Federation of the Indian Chambers of Commerce.
1 elected by Provincial Co-operative banks.
1 nominated Government official (who will not be entitled to vote).

[1] References to clauses in the Bill from here onwards are to the draft of the third Bill.

[2] 1 lakh = Rs. 100,000 = £7500.

11 Directors elected on behalf of the shareholders, viz. three each for the Bombay, Calcutta and Delhi registers; and one each for the Madras and Rangoon registers.

The shareholders were to elect delegates for the purpose of electing Directors. There were to be twenty-four delegates each for the Bombay, Calcutta and Delhi registers, and ten each for the Madras and Rangoon registers. The election was to be held once in every five years, and a candidate for the delegacy must be nominated by not less than twenty shareholders. No shareholder, whatever his holding, was to be entitled to more than one vote. The Board was to meet within each quarter and not less than six times a year.

The qualifications of the Directors are not without interest in view of the discussion that had been aroused. In the first place, no person was to be a Director who was not or had not at some time been actively engaged in agriculture, commerce, finance or industry, or was not a Director of a corporation or company registered in British India. Government officials, servants of any bank, or directors of any bank other than those of Co-operative Societies, were ineligible for Directorship. It was also provided that no person could combine Directorship of the Reserve Bank with membership of the Indian Legislature or of a local Legislature.

The third Bill was uncompromising in fundamentals, although accommodating in details necessary to meet the special conditions of India. There could not be any paltering with principle. The result, however, was unfortunate, and it is easy to be wise after the event. When the deadlock occurred last autumn it was apparent that the chance of the Bill becoming law was, unless guided by a politician of tried capabilities, but a slender one. It was a real task for any sponsor when the Assembly was opposed to a shareholders' bank. The Assembly insisted upon a State Bank, without share capital and governed by Directors appointed in part directly from the Legislature. The Government under this scheme would have issued Reserve Bank stock different in no way from any other type of Government debt, and the holders of this would have been paid from Government revenues interest on this stock. The holders of the stock, in short, would not have been connected with the Bank's fortunes. The Directors would not have been responsible to an electorate financially interested in the Bank. Fortunately this idea of a State Bank was dropped. The scotching of the third Bill by the President of the Assembly was, as we have seen, due to the fact that he refused to permit

the introduction of a new Bill while the old one was still technically on the order paper. It would appear that the whole affair to those who knew their India was a forlorn hope when Sir Basil Blackett did not stick to the recommendation of the Hilton Young Commission, a recommendation accepted by the Government of India and the Secretary of State for India, viz. a shareholders' bank and a bank free from politics. Many believe that Sir Basil Blackett made in this a blunder of the first order. The death of the Bill is deplorable on larger grounds. Indian banking is in need of great development achievable through a Central Bank such as all countries in the van of financial progress possess. This need of development is seen in the following table:

	Capital and Reserves (in millions.)	Number of Offices.	Average deposit per head.
U.S.A.	£1052	30,000	£73
Great Britain	£180	9,500	£57
Australia	£59	2,500	£63
Canada	£25	3,400	£44
India	£19	500	15s.

A country without a Central Bank is almost shut out of the family of nations. Mr. Montagu Norman, Governor of the Bank of England, stated before the Hilton Young Commission in answer to the question, "Is it not a fact that there is hardly a modern State whose economic development is progressive which has not established a Central Banking system?": "As far as I am aware there is not one, and I think I may go further and say, all those countries which have progressed most quickly, and, so far as one can judge, most permanently, with reconstruction in the last six or eight years are those where you have a strong and independent Central Bank." [1]

III

Owing to exigencies of space it is not possible to review in any detail the principles underlying the Bill. It is, however, necessary to indicate some of the more important, so that he who runs may read and reading understand. In the first place, the Bill provides that the Reserve Bank should be free from Government control. Since the war, especially since the International Conferences of Brussels and Genoa, the importance of this principle needs no emphasis. In this connection it is desir-

[1] *Royal Commission on Indian Currency and Finance*, Vol. V, 1926, Q. 15,065.

able to have a bank with shareholders' capital. No less than twenty-one out of twenty-eight Central Banks are shareholders' banks. The exceptions—the State Central Banks (viz. those of Australia, Russia, Finland, Latvia, Sweden and Bulgaria)—are few in number and are certainly not of the first rank financially. The Bill provides, as do the majority of Central Bank charters, that both shareholders and those representing certain interests in the country are eligible for election. It also follows the charters of the Federal Reserve Banks and the Central Banks in Austria, Belgium, Italy, Poland, Greece, Czechoslovakia, Estonia and South Africa in that there is a definite clause prohibiting the election of politicians. Professor Kemmerer, of Princeton University, in a published Memorandum prepared for the Government of Poland on the revision of the charter of the Bank, rightly said that "The history of other countries shows that Central Banks of issue often become subjects of political controversy and of strong political animosities, and further, that the greatest single danger to Central Banks is probably the danger of political exploitation." Mr. Montagu Norman, the Governor of the Bank of England, whose judgment in these matters is of high value, told the last Royal Commission on Indian Currency and Finance that "We have the experience in Europe that in the case of the banks in which the Government has held considerable measure of control or there has been a limitation on the freedom of the bank, it has not resulted to the advantage of the community." [1]

The Bill provides, as do no fewer than sixteen Central Bank charters, that the dividends payable to shareholders are to be limited, and a share of the net annual profits above the minimum is to be shared by the Government, the reserve fund and the shareholders. The limit is fixed at 5 per cent., and the scale above the minimum is so adjusted that the shareholders can never get more than 7 per cent. The fear expressed in some quarters of large profits going into the pockets of Indian and foreign capitalists is thus unfounded. The Government and the reserve share the excess. The Bill preserves the main functions of Central Banks, which, I think, may be grouped as follows:—

(1) The exclusive right of note issue, usually for a definite period; (2) the discounting and rediscounting of bankable bills; (3) the right to the banking business of Government; (4) the right to act as the banker of member banks but not to compete with them (except in the most exceptional circumstances) for

[1] *Minutes of Evidence* (Vol. V): Q. 14605; cf. Q. 14594.

general business; (5) to maintain assets in a liquid condition (the Bank is thus precluded from certain business: a Central Bank has its primary duty to the nation, not to its shareholders, and to command complete confidence in all circumstances it must not be exposed to the same kinds of risks as those of commercial banks); (6) to publish discount rates and frequent and regular returns, and (7) to study credit problems which confront a Reserve Bank, and the relationship of these problems to general business development. It is to be hoped that these will be read, marked and digested by those interested in the present banking structure of India.

The problem then lies in the lap of the future. There are plain, very plain, indications that the acquiescent attitude in regard to Indian banking is being modified. We are at present only on the threshold of the work in regard to it, and a gigantic field lies yet untouched. It is unfortunate that the Bill, which was born on the ill-starred 13th January, 1927, passed peacefully away in the Legislative Assembly on 10th February this year. We may perhaps be allowed to quote in regard to Sir Basil Blackett the words of Grattan: "I sat at its cradle; I followed its hearse." It is hoped that in the present case a legitimate heir will be recognised, at least before the expiry of the charter of the Imperial Bank of India in 1931, by the new Finance Minister, Sir George Schuster, with the co-operation of the Indian Legislature.

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THE TREATMENT OF PRICE PROBLEMS

THE essential function of economic theory is to explain how prices are fixed. In this problem two separate questions are involved, namely, the question how prices are determined relatively to one another; and the question how the unit of price-reckoning is fixed, in other words, how the absolute height of prices is determined. It is well to keep these two questions apart. The first question is the object of general economic theory, the second is a monetary question, the solution of which is the essential object of the theory of money.

The whole problem of price-fixing must in the first instance be discussed on the assumption of a closed community without any relations with an outside world. The simplest assumption is, then, that a country has a paper currency so regulated as to keep the general level of prices constant. All practical price problems must then be treated under this assumption, a dislocation of the general level of prices being excluded by hypothesis. A rise in certain prices must under such circumstances always be counterbalanced by a fall in other prices, and the analysis of any particular price problem is not complete until both sets of movements are laid clear.

It is possible that the problem has a monetary side. The discussion of this side must then take the form of an inquiry into the effect of the given causes on the problem of keeping the general level of prices constant and on the practical policy required for that purpose.

If we have to do with two countries trading with one another, a new element enters into the price-fixing problem. The simplest assumption is here that the currency in each of the two countries is on a paper basis and so regulated that the general level of prices remains constant. The effect of any new factor in the price-fixing problem may then be studied partly as a dislocation of relative prices in each of the two countries, and partly as an alteration in the rate of exchange between the two countries.

Theoretically, any change in the economic conditions in the two countries or in the trade relations between them may cause an alteration in the rate of exchange. In theory, therefore, the possibility of such an alteration should always be examined. In practice, however, such an effect mostly seems to be confined within very narrow limits. Considerable move-

ments in the rate of exchange are usually possible only as a consequence of alterations of the general level of prices in either country. If these levels, according to our assumption, are kept constant, the rate of exchange between the countries may generally be expected not to be very sensitive to the influence of economic factors, whose effects must therefore mainly be confined to dislocations of relative prices in the two countries.

This result, which is of importance for the Purchasing Power Parity Theory, has sometimes been contested, and it has even been said that the effects of economic causes on the rate of exchange may be very much greater than those of monetary causes, *i.e.* of alterations of the price levels. This view ought to be very definitely disproved by the fact that alterations of the price level in one country may easily cause the rate of exchange to rise ten or a hundred times or even much more above its former height; whereas, if the general levels of prices in both countries remain constant, only extraordinary perturbations of the economic conditions are likely to call forth movements of the rate of exchange of any practical importance. Such movements are generally almost inappreciable if the two countries are connected with one another by intimate and many-sided trade relations. More important alterations in the rate of exchange can only take place in exceptional cases, when the external trade of at least one of the countries is essentially dependent upon one or a very small number of commodities. The doubts that were previously entertained on this subject must have been very much weakened by the remarkable fact that it has been possible after the tremendous economic revolutions connected with the war to restore the old rates of exchange between the leading countries without any appreciable change in the relative price levels of the countries concerned.

Even very important increases in the custom tariffs have been unable to produce any considerable effect on the rate of exchange between countries where the relation between the general levels of prices has remained unaltered. The effect of any alterations in the tariff of a country is therefore essentially only an effect on the relative prices of commodities. The consequence is that an increase of the custom duties must have an effect not only in a rise of the prices of some commodities, but also in a corresponding fall of some other prices. These movements must counterbalance one another in order that the general level of prices may remain intact. No study of the tariff problem is complete if no notice is taken of this effect in the direction of

the depression of some prices. It follows that the popular calculations of the " burden of the tariff," which are simply based on the rise of prices which is believed to be caused by the tariff, are entirely groundless and have to be rejected as lacking all sense.

For a profound study of the effect of the tariff there remains, of course, the question how the tariff has affected the rate of exchange. Generally, however, the result of an examination of this question must be expected to be rather negative.

If the currencies are based on a gold standard, the treatment of the price-fixing problem is not materially altered, but takes technically another form. In order to secure a stable gold standard for itself a country has to keep its rate of exchange on another gold standard country (which we may imagine to be the rest of the world) constant. If in our former case any alterations in the rate of exchange should have been caused, these alterations must now take the form of a movement in the opposite direction of the general level of prices within the country. Thus there is a possibility of a displacement of a country's general level of gold prices, and this possibility must be separately discussed. But such a displacement must generally be expected to be confined within very narrow limits. Leaving such effects aside, and assuming for the sake of simplicity that the purchasing power of gold on the world's market remains constant, that is to say, that the general level of the world's gold prices is kept unaltered, every price-fixing problem for a single gold-standard country has to be studied under the assumption that the general level of prices of this country is kept invariable. Any rise of prices must then necessarily be counterbalanced by a corresponding fall of other prices.

Some factors may have an influence on the purchasing power of gold on the world's market. Such influence must therefore be the object of a particular examination. Under modern conditions, however, the purchasing power of gold on the world's market is not fixed automatically by the play of economic forces. It is becoming more and more recognised that it is possible for co-operation between the leading countries and their central banks to acquire a very strong control over the purchasing power of gold. By a well-devised gold-economising policy it must be possible to exercise such a control on the monetary demand for gold as will secure at least for a certain time a fixed purchasing power for the metal. Assuming such a policy to be followed up with sufficient consistency, the question of how certain economic forces affect the purchasing power of gold takes the form of what particular difficulties they put in the way of the gold-economising

policy. If this policy is assumed to succeed, the question of an alteration of the general level of the world's prices, expressed in gold, may be left on one side. The price-fixing problem for any single gold-standard country is then practically reduced to a problem of relative price-fixing.

It seems very desirable that economists should come to a mutual understanding with regard to the formal treatment of price-fixing problems in order that the discussion of such problems may be carried on as far as possible on technically uniform lines. I venture to submit the above remarks as a starting-point for attaining a rational uniformity of treatment.

In the issue of this JOURNAL for June 1928 Sir Josiah Stamp has discussed the influence of taxation on the price-fixing process. We have here a good example of a problem whose treatment would gain very much from a clear distinction between the effects on relative prices under the assumption of a stable general level of prices, and the effects on this level itself under the assumption of a gold standard. The latter question is under the conditions actually prevailing essentially a question of the influence of South African taxation on the gold production of the Rand. The gold producers of South Africa are of the opinion that their trade is very much hampered by the pressure of South African taxation. If, according to their view, this taxation reduces the annual production of gold, the general price level of the world may be affected. But at least for a certain time the consequences may be confined to an aggravation of the difficulties which have to be surmounted by the gold-economising policy. Thus it is possible that the general level of gold prices may be kept constant, irrespective of the influence of South African taxation. Taxation in other countries, particularly in countries which do not themselves produce gold, may reasonably be assumed to have no influence on the purchasing power of gold. Thus the question of the influence of taxation on prices is reduced to a question of relative price-fixing within the country concerned. And we come back to our general rule that the price-raising effects must be counterbalanced by corresponding price-depressing effects. A natural consequence is that no statistics concerning average prices can be expected to tell us anything about the effects of taxation.

Clearly, the treatment of the problem will be very much simplified by this limitation of its scope. Certainly the problem of the influence of taxation on prices still remains difficult enough!

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THE NATURE AND PRESENT POSITION OF SKILL IN INDUSTRY

AT a recent meeting of the British Association, Professor T. H. Pear opened a discussion on this subject, which he approached as a psychologist. He proposed to define skill in psychological terms as " an integration of well-adjusted responses to external situations."

He maintained that the exercise of skill plays an important part in the development of personality, and that the elimination of it from industry, which is one of the main aims of modern methods, must have grave social consequences.

He held that work which gives no scope for skill can hold no adequate stimulus or satisfaction for the worker, and that, if we must reconcile ourselves to this state of things, we must approach many social problems from an entirely new angle.

I have two criticisms to make on this line of thought.

In the first place, I do not like the definition.

I would prefer to call Professor Pear's " skill " by the name of " dexterity," and to reserve " skill " for a broader combination of qualities. I suggest that, in industry, the term " skill," though admittedly used rather loosely, has a very real meaning, which might, I think, be stated as follows :

> Any combination, useful to industry, of mental and physical qualities which requires considerable training to acquire.

It is generally a combination of conscious knowledge and dexterity. Either may predominate and the other be of a relatively low order, but the level of the combination must be fairly high.

It may be that this is a quibble about words, and I should agree that industrial skill, as I have sought to define it, includes, generally, some amount of skill as defined psychologically. There must always, I think, be some power of doing as well as knowing.

While there may be a case for separating out the elements of my " industrial skill " into knowledge, dexterity, power of decision and what not, it is, nevertheless, the combination that

matters in industry, and it seems to me a great convenience to call it "skill."

My second criticism is that, if the "skill" which is under discussion is merely what I have called "dexterity," then I do not see that its disappearance from industry is of any great moment. I agree that the exercise of dexterity does give one a glow of satisfaction, but it is not the only vehicle of self-expression in work.

I suggest that satisfaction in work comes from two things: the doing well of something that is difficult and the freedom to exercise some degree of choice. The difficult thing done need not necessarily be physical. There is a great satisfaction to be derived from work in which the main requirement is the correct use of knowledge.

To my mind the social problem which is involved in the mechanisation of industry turns on whether "skill," in the sense in which I would like to use the term, is fated to disappear, rather than on the elimination of that "physical dexterity" which Professor Pear calls "skill." I propose to examine the question from that point of view, and, in what follows, it must be understood, therefore, that the term "skill" is used in the industrial sense as I have defined it.

It is common knowledge that many kinds of skill, which formerly were necessary, are being eliminated from industry. This is true, whichever definition is adopted. Jobs are being split up so that a composite operation which required long training for its performance is broken down into elementary jobs, each so simple that it can be done with very little training. The proud boast of Mr. Ford may be quoted, that 85 per cent. of the jobs in his works do not need more than two weeks' training. From this, the conclusion has been drawn that the industry of the future will only find employment for the feeble-minded, and the question is naturally asked, "What are we going to do about it?"

I suggest that the picture which is conjured up by Mr. Ford's developments is distorted, and that the conclusions which seem so naturally to follow from it are not nearly so inevitable as they appear. It must be remembered that to keep Ford's works going there are very many other shops occupied in making machines and tools for him, and that much of such work cannot be reduced to a mass-production basis and requires a good deal of the engineering craftsman's skill; it also requires a fairly high proportion of designing skill. Further, the reducing of manu-

facture to mass production involves the development of an organisation of control, with a refinement of clerical methods, that introduces large new fields of skill. There is also the need for greater regularity of raw materials, and of all the various supplies used, and this means that all of Ford's suppliers are having to go in for more and more work of a scientific laboratory nature, in order to be able to conform to his necessarily stringent specifications.

Moreover, as soon as production has been placed on a mass basis, the problem of selling—of creating markets—becomes acute, and the modern selling methods which have resulted require a high level of skill to be exercised by large numbers of people.

I am inclined to think that if all the ramifications of Ford's suppliers of material and equipment could be traced out, and the selling staffs of all were also taken into account, it would be found that the degree to which skill of one kind or another entered into the complex had not changed nearly as much as would appear at first sight from the days when Ford was a small man making cars mainly by craftsmen. Certainly no one will contradict that more skilled men, in actual numbers, are being employed now in connection with Ford's activities—taking all the ramifications mentioned—than would be the case had he never embarked on the policy of mass production based on the elimination of skill.

What is happening is that skill which used to be applied to the production of articles of *direct* consumption is being eliminated and replaced by skill applied to the design and construction of the machinery and tools for making those articles; to a more refined control of the raw material out of which they are made; to the finding of markets for them; and to the control of complex organisations.

Another tendency must also be noted.

Any given kind of work to which the process of mechanisation is applied goes through various stages of development, and it is important not to confuse an intermediate stage with the final one.

At the outset, work is dependent on the skill of a craftsman.

Next, a machine or tool is developed which replaces the skilled movements of the craftsman by movements controlled by mechanism. The operator's part is to adjust or "set" the machine to do a particular job; to start and stop the various motions of the machine at the correct moment; to place the

raw material in it in the correct way; and generally to see that the machine is doing its work properly. Such a machine is usually "universal" in that it can do a large variety of work, and the operator must be able to set and operate it for such variety. This stage also involves considerable skill, but a skill containing more of the elements of knowledge and judgment than of physical dexterity.

Under the need for greater production, the next stage is to split up the operations done on the universal machine into elements, and to have a single-purpose machine often, though not necessarily, automatic, to do each. Such a machine is manned by an unskilled operator, and often all he has to do is to place the raw material in position and remove the finished work, no skill worthy of the name being required. It must be noted, however, that at this stage various new kinds of skill are brought in, and are exercised by additional individuals in ancillary services. There is the "setting up" of the machine, the keeping of it in repair, the separate inspection of the work, et cetera, et cetera. Nevertheless, it is quite likely that at this stage the proportion of individuals who are called on to exercise skill in connection with the work is less than in the earlier stages.

The solution of splitting up a job into a number of elements, each performed on a single-purpose machine, involves a great deal of intermediate handling, and, to eliminate this, more elaborate machines are developed, which combine several elementary operations and which are fully automatic, even perhaps to the extent of placing the material in position and removing the finished work. While even at this stage the machine may still be operated by an unskilled man, it is much more likely that it will have become so complicated and the cost of a mishap be so great that highly skilled operators will be employed, who have not only to work the machines but to keep them in adjustment. Such work may well call for a very high degree of skill in the form of judgment, alertness to recognise the first signs of the hundred-and-one things that may go wrong, and a real understanding of the principles on which the machine works. In such a case the unskilled portion of the labour concerned with the process has been practically eliminated; for not only have we the various skilled ancillary services, but the very operator has again become a man of skill.

On the other hand, if an unskilled operator is still employed, the work which is entrusted to him is so simple that he will look after a whole battery of machines, and the number of such men

will be greatly reduced compared with the increased numbers engaged on the more skilled ancillary services.

The first impression, that skill is being more and more eliminated from industry, must be corrected by noting these two tendencies.

The first is that the skill which is being eliminated from the actual production of "consumption goods" is being replaced by skill devoted to the making of the *means* for producing them. New skills are also being called into being in the ancillary services in the factory, in the way of inspection, routing of work, control of more complicated organisations, et cetera. The increased skill of modern selling must also not be forgotten.

The second tendency is that, as the process of replacing the primary workers' skill by more and more automatic machinery goes on, the machine becomes so complicated that the work which can be entrusted to the unskilled man gets to be so restricted that it is included with that of the skilled machine setter, the unskilled man being finally eliminated. True, the machine setter does not need the skill of the "cunning workman," but the qualities of judgment, observation, quick action and understanding constitute skill of a very real kind. The output of machines that have developed to this stage is, of course, so great that the direct wage element of the cost of the product is insignificant, and does not constitute a bar to employing a skilled man.

How far these tendencies will correct the balance of skill in industry, which the process of mass production seems so seriously to upset, cannot be ascertained without some far-reaching research, but it must not be forgotten that the part of the process of change which is in the limelight consists of just those cases, like Ford's, where the tendency is all in the one direction. The corrective tendency goes on in numberless smaller works and from its nature is not spectacular, and is apt to be overlooked. I would also suggest that even Ford has not reached the final stage which I described in nearly all the possible cases.

My own view is that the proportion of skill --using the term as I have defined it-- is not in fact being very seriously upset. I believe that as fast as one type of skill is eliminated other types of skill are called into being. If this is so, the problems due to elimination of skill are personal rather than general, viz. what to do with those individuals whose particular skill is no longer wanted. To them personally the process is apt to be one of de-grading from craftsmen to unskilled machine tender. This

is serious enough, but presents a less dismal outlook than the view that industry will ultimately have no use for any kind of skill.

I am encouraged in my view by experience in my own works, which is an engineering factory making repetition articles, and which has been going through a process during the last fifteen years of development on the lines of "scientific management." We have carried perhaps as far as any firm in England the process of "distillation of skill" and specialisation of management functions.

I have made an analysis of our employees with reference to skill at three different periods—1913, early 1927 and the present time (August 1928). The results are given in the following tables. The basis of measurement of "skill" is necessarily somewhat arbitrary, but I have used the same basis for each of the three years dealt with, and I think that the indication as to tendencies, brought out by the figures, will stand criticism. I have used "skill" in the industrial sense, not the psychological, and have taken as a dividing line skill which requires about two to three years to acquire under ordinary industrial conditions, *i.e.* of training on the job, not by means of whole-time intensive courses.

Looking at Tables I and I*a*, the striking movements are:

1. The growth of the craftsman category, both in numbers and in percentage of the whole.

2. The reduction in numbers of both semi-skilled machine operators and unskilled labourers. This is due to:

> (*a*) The introduction of more elaborate machinery, giving greater output and requiring less "manning."
>
> (*b*) The growing use of skilled men on such machines.
>
> (*c*) The increased use of women for unskilled work.

3. The reduction in numbers of "Upper Staff" and "Male Clerical." This is dealt with in a note to Table II.

4. The marked growth in numbers of women.

From Tables I and I*a* I have picked out the categories that seem to me to involve skill of the degree mentioned, and have added them together in Table II to summarise the relation of skill of all kinds to the total numbers employed. By the above test I have ranked as "skilled" the following groups:

Craftsmen:

> These have all learned a trade and are called on to practise it.

Craftsmen-Apprentices :

If not yet all fully qualified as skilled their numbers are a measure of our need for craftsmen-skill.

All male staff workers, including :

Upper staff.
Foremen.
Draftsmen.
Clerical.

And of the women staff workers :

Upper staff.
Forewomen.
Clerical over twenty-one years of age.

Practically speaking, all the women on production work are unskilled.

The inclusion of all the male Clerical and the women Clerical Staff over twenty-one years of age may be questioned, but a close inquiry into the work convinces me that an experience of at least two years is needed to do any of the various jobs well. Much of the old clerical drudgery, which required little or no skill, has been eliminated by the introduction of calculating and statistical machines, book-keeping machines, duplicating and printing devices, and other appliances. What unskilled clerical work is left is done by girls under twenty-one years of age.

In Table II I have shown the sum of these various groups of skilled people in relation to the total numbers employed, and the result shows that the proportion of "skill" of one kind or another has remained practically constant. The period of fifteen years between 1913 and 1928 has seen a revolution in our manufacturing processes, clerical and statistical methods, and in our organisation. All steps have been designed to replace skill by machine, or to subdivide complex skills into simple ones. And yet the result is as I have shown.

It may be asked, on examining these figures, whether the development of scientific management based on the elimination of skill has not been a failure, since, by my own showing, it has left the proportion of skill nearly constant. This can only be answered by an examination of the production at the three dates in question. Taking all the employees together at each date, what did each of these variously constituted groups manage to produce? The results are shown in Table III.

The 1,807 people in 1928, containing 34·9 per cent. of skill,

Hans Renold, Limited, Manchester

Analysis of Employees with Reference to Skill of Occupation

Table I.—*Men (in Detail)*

Year.	Total Number of Employees.	Men.																Women.	
		Factory Workers.								Staff Workers.									
		Craftsmen.		Craftsmen Appren-tices.		Semi-skilled Machine Operators.		Unskilled Labourers.		Upper Staff.		Foremen.		Draftsmen.		Clerical.			
			%		%		%		%		%		%		%		%		%
1911	1,150									66	5·7								
1913	1,256	130	10·3	36	2·9	215	17·0	273	21·8	71	5·7	23	1·8	17	1·4	150	11·9	341	27·2
Jan. 1927	1,350	193	14·3	30	2·2	180	13·3	85	6·3	62	4·6	39	2·9	17	1·3	76	5·6	668	49·5
Aug. 1928	1,807	287	15·9	35	1·9	210	11·6	196	10·8	59	3·3	39	2·2	18	1·0	78	4·3	885	49·0

Table Ia.—*Women (in Detail)*

Year.	Total Number of Employees.	Men.		Women.									
				Factory.		Staff Workers.							
				Semi- and Unskilled.		Upper Staff.		Forewomen.		Clerical over 21.		Clerical under 21.	
			%		%		%		%		%		%
1911	1,150					4	0·35						
1913	1,256	915	72·8	276	22·0	7	0·6	3	0·2	24	1·9	31	2·5
Jan. 1927	1,350	682	50·5	512	38·0	13	0·9	2	0·1	97	7·2	44	3·3
Aug. 1928	1,807	922	51·0	718	39·8	12	0·7	2	0·1	101	5·5	52	2·9

1913.—Activity normal and distribution of personnel between various categories normal.
Jan. 1927.—Period of slackness affecting chiefly the unskilled; hence abnormally high percentage of skilled categories.
Aug. 1928.—Period of extreme activity, affecting first the unskilled grades of factory workers. Consequential increases in managerial and other skilled grades are due but not yet effected. Hence momentary drop in percentage of skilled categories.

HANS RENOLD, LIMITED, MANCHESTER

Summary of Numbers in all Skilled Categories

TABLE II

Year.	Total Number of Employees.	Men.							Women.				Total Number of Employees.	Percentage of Total Skilled to Total Employment.
		Craftsmen.	Apprentices.	Upper Staff.*	Foremen.	Draftsmen.	Clerical.†	Total Skilled Men.	Upper Staff.*	Forewomen.	Clerical.	Total Skilled Women.		
1911	1,150			66					4					
1913	1,256	130	36	71	23	17	150	427	7	3	24	34	461	36·7 ‡
1927	1,350	193	30	62	39	17	76	417	13	2	97	112	529	39·1 ‡
1928	1,807	287	35	59	39	18	78	516	12	2	101	115	631	34·9 ‡

* " Upper Staff " = all paid on monthly salary basis. Between 1913 and 1927 a change occurred in H.R. Ltd. principles of staff grading; some graded as " Upper Staff " in 1913 would be graded as " Clerical " in 1927. This partly accounts for decrease in this category.

† Decrease in " Male Clerical " is due to introduction of office machinery and the substitution of women which this has facilitated.

‡ If allowance be made for the state of business activity (see note to Table I) the percentage of skill would be still more nearly constant.

HANS RENOLD, LIMITED, MANCHESTER

Output per Employee and per £ of Wages Paid Out

TABLE III

Year.	Output per Employee in Selling Value at Actual Prices.*	Price Index of H.R. Ltd. Products.	Output per £ of Wages Paid Out.	Wage Index H.R. Ltd.†		H.R. Ltd. Average Wage (all Employees).†		Cost of Living Index, Board of Trade.
				Men.	Women.	£.	Index.	
	£		£					
1911	130	100 ‡	2·45	100 ‡	100 ‡	53	76	
1913	161	100	2·42	100	100	70	100	100
1927	303	110	2·06	180	200	155	222	169
1928	383	100	2·26	185	200	135	193	165

* " Actual prices " means prices ruling at each of the three dates.

† " Average wage " is not in line with H.R. Ltd. wage index because of—

(*a*) The variation in proportions of the different grades of employees.

(*b*) As between 1927 and 1928, the high proportion of skilled grades in 1927 (see note to Table I).

‡ These figures, due to inadequacy of records, are somewhat conjectural, but are believed to be substantially correct.

produced in value nearly two-and-a-half times as much per individual as the group of 1,256 people in 1913, which contained much the same proportion of skill, viz. 36·7 per cent. As the price of the product has now, in 1928, just got back to the 1913 level, no correction on this score is needed. Incidentally, although the prices are down, the wages are substantially above the 1913 level. The increase in productivity, as measured in selling value, does not, however, quite compensate for the rise in wages. If it were possible to express the output conveniently in numbers, weight or feet, the increase in productivity would appear greater still. A scrutiny of this table suggests that the benefits of the increased efficiency have gone, in very full measure, to the public and the employees.

These figures seem to support my general contention that modern developments of industrial methods require just as high a proportion of skill of one kind or another, and at some point in the complex, as was needed previously. In the case I have cited, the company produces much of its own machinery and tools, and hence gives a truer picture than does a business like Ford's, where there is no means of estimating the volume or nature of such work, which is distributed and hidden away in the records of other, unrelated, concerns.

If it be objected that the "skill" which I have been talking about is not Professor Pear's "skill," then I would reply that, while admittedly "skill" in the latter sense is needed less and less, its disappearance does not raise any general social problems and does not indicate that industry will, in the future, only provide stimulus and satisfaction to the mentally deficient. There is as much satisfaction to be derived from the exercise of skill in the sense in which I have been using the term as there is from the exercise of dexterity.

If the satisfaction which industry now offers is felt to be insufficient for a full life, the cause does not lie with the trend of industry, but with the greater demands on life which a more highly educated people is making.

ADDENDUM

The movement in numbers of Upper Staff and Clerical Workers revealed by the statistics quoted in the foregoing paper were so surprising that a further investigation was made. It was thought possible that the picture might be misleading due to taking the year 1913 as the starting-point, as the business referred to was,

in that year, experiencing the first flush of enthusiasm for scientific management methods, and it might be that a great increase of Upper and Clerical Staff had just recently taken place.

Unfortunately, the records previous to 1913 are less complete than the later ones, and it was only possible to trace the number in the case of "Upper Staff." In 1911, which was well before the introduction of any "scientific management" ideas, the number of such staff was 70 as against 78 in 1913. The total number of employees had grown over the same period from 1,150 to 1,256. This growth of Upper Staff is rather greater than is justified by the growth of total numbers of employees, and would seem to indicate that the introduction of scientific management had a tendency, at the outset, to increase the proportion of this group. But if the comparison be made between 1911 and 1928 instead of between 1913 and 1928, the fact brought out by the first investigation still remains true, viz. that the proportion of Upper Staff is now substantially less than it was before the introduction of scientific management.

Although the figures of Clerical Staff for 1911 are not available, there is no reason to think that they would place any different complexion on this conclusion.

The figures for Upper Staff and Skilled Clerical Staff, inclusive of the 1911 figures, are summarised below.

TABLE IV

Year.	Total Number of Employees.	Upper Staff.				Clerical Staff.			
		Men.	Women.	Total.	%.	Men.	Women over 21.	Total.	%.
1911	1,150	66	4	70	6·1	*	*	*	*
1913	1,256	71	7	78	6·3	150	24	174	13·8
1927	1,350	62	13	75	5·5	76	97	173	12·8
1928	1,807	59	12	71	4·0	78	101	179	9·8

* Figures not available.

In addition to the above, the figures for "Output per Employee" and for "Average Wage" are also available for 1911, and have been interpolated in Table III, as have also figures for "Price Index" and "Wage Index." These last are, however, somewhat conjectural, due to inadequate records, but are certainly approximately correct.

The main contention that skill has been on the increase as management methods have developed is borne out, as between

1911 and 1913, by the comparison of the figures for "Wage Index H.R. Ltd." and "H.R. Ltd. Average Wage." The first of these gives the average of the changes in wage rates of various classes of employees, while the "Average Wage" is the total wage bill divided by the total number of employees.

As between 1911 and 1913, the wage rates for each class of employee remained, on the average, constant, but the average wage rose substantially. This can only mean that a general "up-grading" of the personnel had taken place. It has already been shown that the proportion of Upper Staff changed very little, and it is believed that the same is true of Skilled Clerical Staff. This being so, the change must have been an increase in the more skilled and therefore highly paid classes of manual workers—probably the same movement that the records prove for 1913 to 1928 in the proportion of tradesmen. There was probably also an increase within each class of the proportion of men near the top limit of skill, and wage, for the class.

C. G. RENOLD

Manchester.

REVIEWS

Economic Problems New and Old. By PROFESSOR ALLYN A. YOUNG. (New York. (London: Allen and Unwin.) Pp. 301. 10*s*.)

WHEN Napoleon conducted the diminished remnant of his army out of Russia in 1812, what was *in esse* a half-armed division was *in posse* the Grand Army. From veteran marshal to veteran sergeant, it contained all the essential elements of that tremendous force.

In this little book of Professor Young's is to be found the doubly distilled essence of an economic system. It covers a great variety of topics, through each of which one aspect or another of the author's views is revealed.

Nearly all the fourteen papers included have been published before (at various dates from 1911 to 1927), but even those economists who already know them will be glad to have them assembled between two covers.

Among the best are two critical articles, one on Jevons's *Theory of Political Economy* (1912), and the other a review of *The Trend of Economics*, a collection of economic essays from a number of American economists (1915). Here is to be found a survey of fundamentals in economic theory. The article on Limitations of the Value Concept forms a companion to them.

Monetary theory and the theory of credit are represented by articles on the Trend of Prices (1923) and the Structure and Policies of the Federal Reserve System (1927). Between them they contain a philosophy of central banking. "There are some who deprecate any interference with the 'natural course of business.' They forget that the operations of central banks cannot but have their effects on business, and that it would be blindly stupid not to take these effects into account when determining just what a central bank shall do and when it shall do it" (p. 80).

"Reliance upon any simple rule or set of rules would be dangerous. Economic situations are never twice alike" (p. 81).

An illuminating account of the special position of the New York Federal Reserve Bank, "first among equals," follows (pp. 84–94).

Closely related to monetary theory are two articles on price

index numbers. But in them Professor Young has restricted himself to the technical side of the subject, with reference especially to methods of weighting and averaging.

Two long articles, Depreciation and Rate Control (1914) and Anti-Trust Legislation (1915), are devoted to topics which are of concern mainly to Americans. They are not without a wider bearing here and there, but that is only incidental to the detailed discussion of the application or interpretation of certain American statutes.

Three articles, the first three in the book, deal with the post-war problems of Europe. They include Professor Young's important report of 1925 on the economic situation of Hungary.

The following quotation sums up the conclusions of Professor Young's address on Economics and War at the American Economic Association (1915):

"The attitudes and activities which we have in mind when we speak of 'the economic causes of war' are not inevitable and unyielding expressions of permanent traits of human nature. They are forms or patterns of conduct and are correlated with particular modes of organisation. Other forms and patterns, associated with other modes or organisation, are within the bounds of practicable achievement."

R. G. HAWTREY

The Behaviour of Prices: a Report of an Investigation. By FREDERICK C. MILLS. Publications of the National Bureau of Economic Research, No. 11. (New York: National Bureau of Economic Research. 1927. Pp. 598. $7.)

THIS volume is, in its way, a somewhat remarkable and valuable piece of work of a kind which, as yet, simply does not exist outside the United States. Mr. Mills has devoted some six hundred pages to the calculation and tabulation of various sets of facts about commodity prices over the period 1890 to 1925, of a kind which anyone who may want to make generalisations about the behaviour of prices will need as the basis of his conclusions. It is the peculiarity of Mr. Mills that he starts without any theories and ends without any, being content to set out his material for the benefit of those who have less taste than he has for laborious investigation, and more taste for theorising. But although so great an unwillingness to attempt the higher flights of thought might be expected to indicate rather low-grade research, this is by no means the case in the present example. The work is a very high-grade one. Whilst the book is formidable in appearance

and by no means easy reading, almost anyone whose business it is to think about price index-numbers and other monetary problems will almost certainly find it useful, since the facts here set forth will serve to correct some of his preconceptions and suggest to him, perhaps, some new ideas which are worth pursuing. The book is a pioneer work in that kind of quantitative observation which has provided the basis on which other subjects have been turned into accurate sciences. Whether the uniformity of economic settings is sufficient to enable the economist to make full use of this kind of work, time will show. But unquestionably it is worth while trying. If economic theory was armed with books of this kind providing quantitative observations over the whole field of the subject, the hopes of progress would be unquestionably increased.

The book is divided into five sections. The first one deals with various measurable characteristics of commodity prices. Mr. Mills makes free use of " price relatives," by which he means the price in any one year measured as a percentage of its price in the previous year. He then measures the degree of variability of the prices of different commodities month by month and year by year, noting the frequency and amount of changes and other characteristics. He then deals with price trends and with the duration and amplitude of individual price changes during general price movements. The nearest he gets to generalisation is the following :—" It is assumed in many discussions that there is a certain 'normal' relation between the prices of individual commodities and commodity groups, and that this relation is disturbed during such price disturbances as were brought by the war. Present evidence indicates that there was no normal pre-war relation between prices, in their absolute form. What was constant in the pre-war price situation was not a set of fixed price differences, but relations which changed at fairly regular rates year by year. To assume that the actual prices in a given year stand in a normal relation to each other is to attempt to crystallise a cross-section of a constantly changing situation."

The next section deals with regional differences in commodity prices, that is to say, the extent to which the variations in price of the same commodity at the same times can be different in different geographical regions. Mr. Mills's data mainly relate to different parts of the United States, and it is remarkable how considerable a variability he discovers to have existed. He also notes down a few particulars relating to movements in different countries, the following table showing how very different even the

average annual rates of change in price between 1896 and 1913 have been in four countries in the case of commodities which we generally regard as standardised and subject to an international price.—

Commodity.	Average annual rates of change in price, 1896–1913.			
	United States. per cent.	Great Britain. per cent.	Germany. per cent.	France. per cent.
Wheat	2·6	1·7	2·0	1·5
Rye	4·1		2·0	
Potatoes	4·3	– ·4	2·7	4·4
Sugar, raw	·2	1·2	·4	
Sugar, refined	·1		–1·2	2·9
Cotton, raw	3·9	3·8	3·8	3·9
Cotton yarn	2·6	3·1	3·1	
Pig iron	1·0	1·7	– ·2	
Copper	1·0	1·5	1·0	
Coal, bituminous	·9	1·1	1·7	1·9
Petroleum	3·5	– ·2		2·2
Wool	1·6	1·5		
Silk	– ·1	– ·1		
Rubber	2·3	3·7		
Hides	3·4	3·2		
Coffee	2·7	- 2·4		– ·1

In another table he produces even more striking evidence as to the differences in different countries in the degree of the year-to-year variability in the prices of these commodities.

In the third section Mr. Mills attempts the measurement of price instability, that is to say, the degree of price dispersion. Here again he shows that the extent of dispersion is much greater than one might have supposed, and in general that the variability of relative prices is quite astonishingly large. He also finds what one would expect, namely, that the changes in relative prices are greater at times when the price level itself is subject to change. The extreme instability of relative prices as disclosed by Mr. Mills certainly seems to me to dispose finally of any confidence which one could have felt in unweighted price index-numbers. It is clear that movements in relative prices are so large that changes in the prices of individual commodities cannot be regarded as good samples of changes in the general price level.

Finally, in the fourth section an attempt is made to deal with the character of price changes during business cycles. This section is, in my opinion, the one in which least material of general interest emerges.

J. M. KEYNES

The Board of Trade. By SIR HUBERT LLEWELLYN SMITH, G.C.B. (G. P. Putnam's Sons, Ltd., London and New York, 1928. Pp. ix + 288. 7*s*. 6*d*. net.)

ALL who are acquainted with the work of Sir Hubert Llewellyn Smith know that he has great skill in reducing to order a chaotic mass of material and exhibiting the result as an articulated structure, with all the parts symmetrically displayed and the purpose of the whole made manifest. Seldom, however, can he have had a more difficult task than in compressing into so brief a space the history of the Department in which he served for twenty-six years, twelve of them as Permanent Secretary, and which he only left in 1919 to hold for eight years more the office of Chief Economic Adviser to His Majesty's Government.

The first germ of the Department is to be found in a Committee set up by the Privy Council on October 24, 1621, to collect and prepare evidence to enable the Council to comply with an order of the King "to take into their consideration the true causes of the decay of trade and scarcity of coyne within this Kingdome, and to consult of the meanes for removing of these inconveniences." In 1649 the Interregnum Act imposed on the new Council of State the specific duty "to use all good ways and means for the securing, advancement and encouragement of the Trade of England and Ireland and the Dominions to them belonging and to promote the good of all Foreign Plantations and Factories belonging to this Commonwealth or any of the natives thereof."

A new Council of Trade was appointed in 1660 and was instructed to "take into your consideration ye inconveniences wch. the English Trade hath suffered in any parts beyond the Seas," the enforcement or improvement of treaties, and "the interest of all such trades as are or shall be Incorporated by Or. Royal Charters." The means by which British manufactures may be "restored and maintained in their ancient goodness and reputation," the establishment of just standards of measurement, the fostering of "Native Commodities" "to the employment of our people and to the best advantage of the publique," the particular care of fishing and navigation, and the general state and condition of the Plantations were also commended to the care of the Council. The governing principle of trade policy was laid down in Clause 7: "You are seriously to consider and enquire whether the importation of Foreign Commodities do not overballance ye exportation of such as are native And how it

may be ordered remedied and provisioned that we may have more sellers than buyers in every part abroad and that the Coyne and ye pressent Stock of these our Kingdoms may be preserved and increased We judging that such a Scale and Rule of proportion is one of ye highest and most prudential points of Trade by which the riches and strength of these Our Kingdom are best to be understood and maintained." Finally, from the Instructions of 1696 we may take this: "To consider of proper methods for settling on worke and employing the Poore and making them useful to the Publick."

These early documents contain in embryo form all the functions which in later years fell to the more developed Department, but too much should not be read into them, modern as some of the old problems may appear. The complaints of merchants forcibly brought trade under the notice of Governments, and the emphatic insistence on the principle of the Mercantile System was a recognition of the organic connection between overseas trade and national welfare, but so far as regards trade the Council of Trade and Plantations had no executive power, and its duty was to make disconnected inquiries into particular problems at the instance of other organs of the Government. The quarrels of ambitious politicians, the jealousies of the "Southern" or "Home" Department, the gross extravagance and inefficiency of the patronage officials, all militated against the usefulness of the Council and ultimately led to its abolition, at the hands of Edmund Burke, in 1782. Nevertheless, much good work was done and the journals of the Council must contain a mass of information regarding the commerce of the seventeenth and eighteenth centuries, which one hopes that Sir Hubert will find time to investigate and make public for students.

William Pitt soon found it necessary—on March 8, 1784—to re-establish the Committee of Council on Trade and Plantations, and so to inaugurate the Department which we know to-day. But this was "probably due rather to the accumulating pressure of practical day to day necessities than to any conscious design on the part of the new Prime Minister to resuscitate the Board of Trade and use it as the instrument of his commercial policy. It was indeed at first a makeshift body possessing neither power, initiative, staff nor funds." Experience of the helpfulness of the Board of Trade (as it began to be called about 1786) in the framing of Pitt's Irish policy and the negotiation of the Anglo-French commercial treaty convinced Pitt of the "absolute necessity of establishing a permanent and well-

equipped organisation to deal with trade matters as part of the machinery of Government," and in 1786 the Department was provided with a Secretary in addition to two clerks already serving, and seven clerks of various grades were attached to it. By 1853 the staff had risen to sixty-six. It was really in the course of the work of freeing trade from the old protective legislation affecting trade and shipping that the Board found themselves. The railway development also came within their sphere, and the need for accurate information for the guidance of Governments led to the growth of an apparatus for dealing with all commercial and labour matters.

Readers must be referred to the book itself for details. From the loins of the Board sprang first the Colonial Office, now separated into the Dominions Office and the Colonial Office. Later the Ministry of Labour and the Ministry of Transport were formed out of the Labour and Railway Departments of the Board. Fishery matters had been transferred to the Board (later Ministry) of Agriculture. The "basic functions" of the Board still remain, as they have been from the beginning, "the advancement of trade, manufacture and navigation, the protection of British trade interests in overseas countries by means of diplomatic representations or commercial treaties, the investigation of complaints by merchants and manufacturers, and the collection of statistical and other information with regard to trade matters."

Overseas trade is cared for by the Commercial Relations and Treaties Department and by the Department of Overseas Trade, the joint organ of the Board of Trade and the Foreign Office. The Mercantile Marine Department administers the law relating to merchant shipping. The Patents Office and the Companies and Bankruptcy Departments supervise industrial property. The function of the Industries and Manufactures Department is to keep itself acquainted with the development and needs of internal manufactures. The Statistical Department is jointly responsible with the Board of Customs for statistics of British overseas trade, and collects and publishes statistics of the trade of other countries, of British shipping, of migration, of prices. It also registers the progress of British industry through periodical Censuses of Production and the new quarterly Index of Production, and deals with economic questions affecting trade and industry such as the "balance of trade." The whole work of the Board is co-ordinated by the monthly meetings of the Board of Trade Council, consisting of the senior officers of the Board

presided over by the President. Finally, the Department is kept in direct touch with public opinion through the monthly meetings of the Advisory Council of nominated representatives of industry, commerce, and finance. It will thus be seen that in the Board of Trade we already possess in all essentials that "Economic General Staff" the creation of which is being eagerly advocated by many as an indispensable aid to the restoration of British trade to its "ancient goodness and reputation."

HENRY W. MACROSTY

Lancashire under the Hammer. By B. BOWKER. (Hogarth Press. Pp. 127. 3*s.* 6*d.*)

THIS is a downright and vividly written book; a little crusade by a courageous man. The analysis which is presented of the Lancashire cotton industry falls into three parts. In the first the author provides a background for his study of the present depression by dissecting the movements which were taking place before the war and by summarising the results of the post-war financial boom. Here he is on safe and charted ground. The ease with which profits were made in the cotton industry before the war; the indifference to and the contempt for foreign competition which was arising; the retention of methods of trading which were unsuited to changing world conditions; the growth of large numbers of unnecessary agents and superfluous middlemen; the tremendous profits made during the war; the amazing over-capitalisation which the 1920 boom period produced,—all these are commonly accepted facts which are yet worth repetition. It might be argued that Mr. Bowker, in order to contrast the conditions of the pre-war and post-war industry, is guilty of over-emphasising the prosperity before 1913. His picture of "wealth on tap" does not exactly square with the serious and repeated depressions in the industry or with the number of committees, official or unofficial, which sat, between 1890 and 1913, to discover the causes of loss of trade. Let him, for example, read an article in *Blackwood's Magazine*, July 1892, in which the steady and inevitable shrinking of the industry is forecasted, and a further article [1] by E. Helm, the secretary of the Manchester Chamber of Commerce, in which the pessimistic view is rejected, but is given sufficiently careful consideration to show that Lancashire the golden was always fearing and often discovering faults and fissures in its vein of

[1] ECONOMIC JOURNAL, 1892.

prosperity. But if the picture is slightly over-tinted it is not distorted. The facts that, before the war, the United Kingdom had about 70 per cent. of the total world exports of cotton goods and that the value of her exports showed a steady and rapid secular increase are sufficient proof of this.

The second section of the book is devoted to the remedies which have been applied and the forces and conditions in the industry which have made these remedies futile. Here Mr. Bowker takes the business man himself as the target. He hits his nail firmly on the head in the sentence, "it is in men and not in things that the deepest trouble lies." His point of view is diametrically opposed to that put forward by Professor Young in his paper before the British Association in 1928. And it is not difficult, in the light of subsequent experience, to castigate the Lancashire cotton man. It is only too clear that there was a complete failure to realise that the depression was permanent and demanded a wholesale reduction in the scale of output; that policies were adopted which postulated a rapid return to 1913 output, and that a body of vested and short-sighted interests was massed to resist the changes which were necessary. The Federation of Master Cotton Spinners comes in for particularly severe treatment. Its organisation is criticised as unwieldy and ineffective. Its leaders are condemned for a vacillating and mistaken line of action. Its members are accused of disloyalty and weakness. For the Yarn Association, however, Mr. Bowker expresses approval as marked as his condemnation of the Federation. This is a rather inconsistent attitude when it is realised that the Association consisted of about 70 per cent. of the American spinning members of the Federation. He sees the failure of the Association as lying almost wholly to the discredit of the 30 per cent. who did not join and were guilty of "immoral" underselling. A more balanced view would suggest that, however laudable the motives of the Association, its policy was no more likely to succeed than that of the Federation. It was attempting to fix prices in a market where prices are fixed by world conditions. Since the transferable quota system never came widely into operation it was restricting output without confining restriction to the least efficient firms. It contemplated operation without reducing the capitalisation of the constituent firms. Its life was essentially precarious, since it had to fix minimum prices high enough to encourage many comparatively inefficient firms to continue membership, and low enough to enable the more efficient to sell that volume of goods which they knew they

could sell as independents in the market. The range of the spinning firms it covered produced questions of demarcation and grading almost impossible to settle satisfactorily. The Yarn Association served a purpose in failing, for by its failure the difficulties of control and reorganisation were laid clear and the way pointed for those smaller, financially reconstructed and more closely knit amalgamations which must necessarily precede any more ambitious scheme of combination.

The force of Mr. Bowker's onslaught upon the business personnel of the industry is lessened by the weaknesses revealed in some of the remedies he advocates in the third section of his book. He stresses three possible lines of improvement. He believes that much is still to be gained from a careful inquiry into international costs of production and a detailed study of the marketing methods of other and more successful textile countries. Few will quarrel with him in this, though it is to be doubted whether the sort of information which he has in mind is always available. There must be many small weaving firms in Lancashire whose methods of accounting are so elementary that they could not allocate exactly their total costs of production over the different items, or say definitely what effect a given increase or decrease in annual output would have upon such costs. The same is probably more true of the small firms in India or Japan. An English board of inquiry, however influential, would have no power to obtain this information from other countries save by indirect means and on a partial scale. His second suggestion, that the war-time Cotton Control Board should be revived probably raises many more difficulties than it would settle. Some degree of unification and control is undoubtedly necessary. A board of the type suggested, we venture to believe, would hardly fill the picture. It would consist of employers and men. Are these two groups likely to agree upon the best methods to adopt, and who is to hold the balance between them? And is the problem of the Lancashire cotton industry to be simplified by placing the spinning section under the control of a board the constitution of which in itself would establish a highly debatable experiment in the joint control of industry? This central board would have the power to fix prices. "It would apply to the Government to have its rulings given the force of law." It is very doubtful, however, whether any Government could do this without a wholesale change in the law relating to all combines and their contracts in restraint of trade. If the industry will not of itself set up such a board, the Government, it is

suggested, should contemplate its compulsory establishment. But it is almost impossible to imagine such a board being successful without the willing co-operation of the industry itself. The board, we are told, would fix prices to prevent underselling. Here it would meet with all the difficulties that wrecked the Yarn Association. On what principles would it fix prices? And would the firms which could not compete at the prices fixed be compensated?

How little Mr. Bowker has thought out this part of his scheme is disclosed by his vague statement that prices would settle "never below a protective minimum" and "never above a fair trading level." There is a great deal more value in the third suggestion, that the formation of larger units in the industry will bring many advantages and pave the way for many more. Whether such amalgamations should be of the vertical form as Mr. Bowker contemplates is perhaps open to doubt. And there is no evidence to prove, as he suggests on p. 121, that the spinning firm in Lancashire is smaller than in other textile countries. Yet the industry is already taking to heart the proposal for amalgamation. The importance of this book, however, lies not in its prescription but in the character of its diagnosis. It crystallises the criticism which has arisen in the last few years, and which, almost as powerfully as money losses themselves, is pushing on the industry to rationalisation. It refuses to take anything for granted. If the book could have been written four years ago, and if the probing attitude of mind which is fostered in it had been taken up by the industry, much loss and suffering would have been avoided.

A last note to the author. On p. 109 he is perplexed by two widely differing figures usually quoted as the number of looms in Japan. The explanation is, that the lower figure is often given as the total looms in that country, but it really represents only those looms owned by firms which are members of the Japan Cotton Spinners' Association, Osaka. The higher figure is the correct one.

JOHN JEWKES

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Russian Economic Development since the Revolution. By M. DOBB. (London: George Routledge & Sons, Ltd. Pp. 408. 15*s*.)

Où va la Russie? By SIMON ZAGORSKY. (Paris: Imp. du Petit Journal. Pp. 338. 10 *frs*.)

OF these two books, the former is of much greater interest to the Western reader than the latter.

Mr. Dobb approaches his theme in the right spirit of sympathy —the best way to make new phenomena understood. The book shows some bias in favour of the Soviets, also an over-estimation of the efficacy of Soviet decrees, but so long as the author is dealing with the theory, or, to be more exact, with the theories of Soviet economics it only serves to render his exposition more vivid, hence more instructive. And considering the present hopeless state of Russian statistics one can hardly ask for more.

Politics in post-war Russia have about the same intensity and the same all-embracing character as religion had in the Middle Ages, and Mr. Dobb justly emphasises the impossibility of detaching Soviet economics from their political background. Whether it is a measure of national importance or a minor local problem, the organisation of the whole system of moneyless State barter or the adjustment of wages in a workshop, Soviets would invariably tackle the question from its social end: What does Marx think about it? are we not too lenient towards the profiteer? who comes first in the revolutionary hierarchy—the workman or the peasant? Considerations of efficiency and of profit and loss would be relegated to a secondary position if not neglected altogether.

The most interesting chapters of the book are those devoted to the New Economic Policy (NEP) and its origin. This indeed is the point that focused all the tendencies of the Communist doctrine.

According to popular conception the NEP with its decentralisation of industry and readmission of private trade marks the bankruptcy of Communism. Mr. Dobb spares no pains to prove that this is much too simple to be correct. From the very beginning of the Revolution, Lenin, the most if not the only practical Bolshevist statesman, termed as Utopian the plan of an immediate realisation of a 100 per cent. communism. He maintained that wholesale nationalisation, elimination of money and economic equality of all were but distant ideals, to be reached

gradually: what was required for and feasible at the moment was that workmen should hold the key positions, such as the control of credit, heavy industry and wholesale trade; elsewhere private enterprise could be left to work side by side with the State, since the latter would always have the means of controlling it so as to make it serve the aims of the new classless society. In time, as the State acquired the necessary experience and enlarged its trained staff, private enterprise would gradually be drawn into and absorbed by the Socialist State. In 1918 the combined pressure of war and anarchy strengthened the hands of the "extremists," who stood for centralisation *en bloc*, and Lenin had to yield and to subscribe first to general nationalisation and then to the elimination of money; but when two years later a breathing space was allowed to the country he reverted to his original programme of gradual reform. The NEP was therefore a return to the regime of the winter of 1917–18, and it is only the extremists of the Communist party who are justified in treating it as bankruptcy.

The strong point of Mr. Dobb's book is the analysis of Bolshevic economic ideas—what the Soviets were out to do and why. As regards the actual economic state of the country the book is much less illuminating: it suffers from a marked insufficiency of general statistical data—as distinct from illustrative figures in the nature of examples—and such general data as are provided refer more often to money values than to production, although in an isolated monopolist state the value indexes present only minor interest. Of course Soviet statistical material is very scarce, partly inaccessible and most unreliable: anyhow, the result is that some of Mr. Dobb's conclusions seem to lack foundation. On p. 331 he says, for instance, that industrial production has almost reached the pre-war level, but there is practically no material on the preceding pages to corroborate this statement. Now, if we turn to Prof. Zagorsky's book we find a series of figures—all of them also taken from Soviet sources—which gives another impression. As compared with 1913:

Production of iron (1925–6) . .	36%
,, of rails (1925–6) .	41
Locomotives, construction (1926–7)	73
,, import . . .	40
Blast furnaces working . .	48

The fixed capital of the whole Soviet industry has been officially evaluated in 1927 at 8·2 milliard roubles, whilst the industry

that had been restored and was then working has been evaluated at 5·75 milliard roubles, *i.e.* about two-thirds of the whole. If we take into account the immense deterioration in quality of all industrial produce in Russia—of which abundant instances and anecdotes are quoted in the Soviet daily press (British merchants too could tell some tales about it)—then it would seem that the 1913 level is not close at hand yet.

On p. 395 we read in Mr. Dobb's book: "the income of the workman is considerably higher than pre-war." One naturally expects to find at least the main figures showing the proportion between the present-day and the pre-war wages, but such figures are not given: we do not even know whether, when Mr. Dobb speaks of income, he means money wages or real wages. Nor do we find such data in Prof. Zagorsky's book—his statistical luggage is hardly heavier than Mr. Dobb's—so that the central question concerning the position of workmen in Russia remains unanswered. But some indirect evidence supplied by Prof. Zagorsky is not reassuring. Take, for instance, the figures of unemployment, truly colossal for a country with 2–2½ millions of industrial population (these are official figures, which according to Soviet sources represent probably one-half of the real figure):

	In thous.
1923	641
1924–5	848
1925–6	1017
1926–7	1353

(The whole problem of unemployment is dealt with by Mr. Dobb in one sentence at the end of the book.)

The safety of work, on account of the worn-out machinery and lack of inspection, is very low: so for the four quarters of 1925–6 the number of accidents with loss of working capacity was, on 100,000 working days: 32·5, 38·8, 45 and 46·3: in the mining industry it was 70 in 1926 as against 47·4 in 1913. (Cf. also the astonishing number of casualties at sea reported in the Press this year.)

There is still less statistical material in Mr. Dobb's chapters on agriculture. On p. 354 he writes of "the raising of the whole village, including the village poor"; but this statement too is left unsupported. The figures of crops stop at 1923 although figures for later years are available. Mr. Dobb mentions that multiple rotation of crops has been introduced on three million dessiatins, but this figure cannot possibly be credited by anyone

who knows the inertia of rural Russia and the poor state of agricultural technique in the country. Prof. Zagorsky's statistics are not very illuminating either, but he gives at least the most important figures of the area sown and of harvests:

Cereals: in % to 1913

	1913.	1923.	1924.	1925.	1926.	1927.
Area sown . .	100	78	83	87	90	92
Harvest . .	100	59	53	76	80	—

The peasant therefore sows less than pre-war and gets less from his land—which hardly testifies to the "raising of the whole village," especially if we consider that, in spite of "Closed Scissors," the peasant gets less industrial goods for his produce than in 1913. Add to this the heavy purchase of grain abroad in 1928, the present outcry of the Soviet Press about the shrinkage of cultivated area and the unsatisfactory collection of grain—and this in spite of a good harvest—and it would seem that all is not well on the "agricultural front" either.

Whether consciously or not, Mr. Dobb conveys in his book the impression that it is not the Soviet policy, but a series of adverse factors—from foreign intervention to the low efficiency of the Russian official—that are to blame if the progress is slower than might be. This is perhaps a useful antidote to the popular tendency of making Lenin personally responsible for every crooked nail that comes out of a Soviet factory. Still there are two reproaches which fall wholly on the Soviet rulers. One is the systematic elimination of cultured elements from all responsible positions, so as to give room to pure proletarians, with the result that administration and a large part of industry and of trade are now in the hands of a staff which leaves the Tsarist officialdom far behind in inefficiency and red tape. The second reproach is a lack of consistency in the Soviet economic policy. Within the Soviet Government there exist side by side several tendencies irreconcilable with each other, and ranging from militant extremism to moderate programmes on the lines of Western Socialism, not to speak of purely capitalistic influences which begin to make themselves felt behind the scene. Hence the inner contradiction in Soviet economics: on the one hand subsidies to World Revolution, on the other the appeal to Western capitalists for loans; the squeezing of the peasant by high industrial prices, simultaneously with assigning of large funds to the improvement of agriculture; the political repression of Nepmen, combined

with the grant to them of further economic facilities: alternate coquetting with the poor, middle and rich peasants; an outcry against intolerable bureaucracy and support of hundreds of farcical State farms. It is this inner contradiction between business and class war, and the instability of policy resulting from it, which makes the work of a cobbler, of the President of a Trust, and even of a Communist Civil servant, equally uncertain and unproductive.

Prof. Zagorsky's conclusions are that the Revolution has by now brought back to life the old classes, except the nobility, but with a new personnel, of course: the bourgeoisie, which is now beginning to bid for power; the peasantry, which has definitely freed itself from the tutelage of the State and is producing in its midst the future squire, for the moment called Kulak; and the workmen, who are now relegated to the old salaried conditions on the same or a lower standard of life than before, but are still enjoying a social prestige and political privileges that reconcile them to the failure of their material aspirations. This social structure points more at capitalism than at socialism: it has proved stronger than the State, since it has formed itself and maintains itself in spite of terrible pressure by the Government, and the only reasonable thing the State can do now is to recognise *de jure* what exists *de facto*, and grant to private enterprise the freedom and facilities which have been until now monopolised by the relatively small socialist institutions of the State.

Mr. Dobb is mainly concerned with the history of the past. To his mind one of the great achievements of the Russian Revolution was the creation in Russia of a democratic spirit free from the Western cult of material success. There is, of course, no equality of material conditions in Russia, but at least Russia has made impossible the accumulation of immense financial power in the hands of single individuals, as is the case in the West, and such gradation of income as there is, is based, in principle at any rate, not on inheritance or chance, but on the social value of the work performed. The new democracy is in no danger from Nepmen or Kulaks, since they have been and will be held in check by the State and the co-operatives.

Mr. Dobb justly emphasises that by surviving the horrible years 1918–22, and by having been able to start on the upward path without any help from abroad—unlike Austria and Germany—Russia has proved an extraordinary vitality. Given energy, he concludes, quick technical progress and good organisation, she may in a few years reach an astonishingly high level of prosperity.

And there is certainly nothing to disprove this conclusion, but one is bound to say that, so far as the available data allow us to judge of the present, the organisation of Russia's economics is not good and the technical progress is very slow indeed.

N. GUBSKY

Die Finanz- und Steuerverfassung der Union der sozialistischen Sowjet-Republiken. By PAUL HAENSEL, formerly Professor at the first State University, Moscow. (Jena: Fischer. Pp. 285.)

Der Staatshaushalt und das Finanzsystem Grossbritanniens. By the same author. (Handbuch der Finanzwissenschaft, Band III.) (Tübingen: Mohr. Pp. 32.)

THE author of these two publications is already known to the readers of our JOURNAL. His book on *Das Steuersystem Sowjetrusslands* was reviewed in the June issue of thee ECONOMIC JOURNAL of last year: "Professor Haensel," says Mr. J. Sykes, "is to be congratulated on his lucid handling of a mass of complex material. His powers of detailed writing, joined to a due sense of proportion and chronological perspective, give the reader a minute picture of the sequence of events and policy." The same merits, characteristic of all Professor Haensel's work, are to be found in the former publication. It is a detailed analysis of the complex system of Soviet Finance and of present-day Russian Budgets. In the first two chapters of his book Professor Haensel gives us a description of the kaleidoscopic changes which occurred in the Soviet financial policy during the past decade, from the abolition of money as an economic phenomenon up to the introduction of a highly developed system of direct and, chiefly, indirect taxation, on which the very existence of the Russian Government now depends. The figures given by Professor Haensel in the text and in the Appendix are very interesting, and give us a full picture of the Russian State revenue and expenditure which is well worth studying. The Budget for 1926–7 includes the following chief sources of revenue:—direct taxes (including the turnover tax), 773 million roubles, or 15·5 per cent. of the total revenue; indirect taxes, 1387 million roubles, or 27·9 per cent.; total produce of taxes, including duties, 2333 million roubles, or 47 per cent. Total non-tax revenue (chiefly from State railways, which are run at a deficit), 2417 million roubles, or 49 per cent. State loans

were entered in the Budget of that year to the sum of 220 million roubles, or 4 per cent. of the total revenue.[1]

In the expenditure for 1926–7 the supply services take up 3243 million roubles, or 66 per cent. of the total expenditure; financing of industry, agriculture, co-operative societies, trade, electrification, etc., 901 million roubles, or 18 per cent. The remaining 16 per cent. are accounted for by such expenditure as purchase of gold and platinum, reserve funds of the Councils of People's Commissars, etc.[2]

These figures of the Russian Budget speak, we think, for themselves, and indicate that the Soviet Budget is based on indirect taxation and loans (internal as well as external) in order to finance nationalised industry and to maintain the administration of the State. "In our present condition," says Professor Haensel, "when the incomes of the population have undergone great equalisation, the preponderance of indirect taxation is absolutely unavoidable." This statement may disappoint those who expect a "proletarian" State to be the first to dispense with so "bourgeois" a source of revenue. Professor Haensel compares Russian Budgets for the last five years, and emphasises the fact that the fiscal needs of Russia grew more rapidly than the national income. The following figures illustrate his point: Russian State Budget increased in five years from 1460 million roubles to 5002 million roubles, *i.e.* the Budget for 1926–7 is three times larger than that for 1922–3. The increase in 1924–5 was 27·7 per cent.; in 1925–6, 31·9 per cent.; in 1926–7, 29 per cent. The increase of the national income for the same years was 31·9 per cent., 28·8 per cent. and 9·4 per cent. This state of affairs naturally causes very great difficulties in balancing the Budgets.

The Russian Government, in spite of the great levelling of incomes, scrupulously follows the class principle and taxes private capital more heavily than State and co-operative enterprises. This policy of discrimination is also illustrated by the following rate of taxation of various classes of the population. Peasants and workers are taxed from 9 per cent. to 12·6 per cent. of their income, the other categories of the population from 20 per cent. to 26 per cent.; men of liberal professions, 20·7 per cent.; house-

[1] In the Budget for 1927–8 these sources of revenue were shown as follows:—direct taxes, 1009 million roubles, or 16·7 per cent.; indirect taxes, 1641 million roubles, or 27·2 per cent. Total produce of taxes, including duties, 2880 million roubles, or 48 per cent. Total non-tax revenue, 2633 million roubles, or 43 per cent. State loans, 525 million roubles, or 9 per cent.

[2] In the Budget for 1927–8 these items of expenditure are shown as follows:—the supply services, 3767 million roubles, or 62 per cent.; financing, 1216 million roubles, or 20 per cent.

owners, 24·9 per cent.; people engaged in private trade and industry, 26·1 per cent.[1]

Direct taxation is discussed by Professor Haensel in the third chapter, where he gives us its history, and a detailed account of the methods of collecting taxes. The income tax on private persons and private enterprises is described with such accuracy that nothing more full, and at the same time more clear, has ever been written on the income tax in Russia. The land tax, in our opinion, deserves more detailed treatment in view of the great social and political consequences of this tax. In the revenue from direct taxation for the year 1926–7 the land tax had brought in 40 per cent., for the year 1927–8, 37 per cent. The land tax in Russia is, as a matter of fact, the Achilles' heel of the whole policy of the present Government, which is trying to stimulate the development of collective and co-operative farming while, at the same time, increasing the tax for well-to-do peasants and fighting the insistent growth of capitalistic tendencies in agriculture.

Indirect taxation, to which the fourth chapter is devoted, is examined as clearly and as carefully. Professor Haensel begins by giving a brief outline of the history of excise in Russia, as well as of the general policy of the Soviet Government concerning it, goes on to a detailed account of the duties on tobacco, vodka, sugar, tea, naphtha, matches, textiles, rubber, footwear, candles, perfumes and cosmetics, and concludes the chapter with a description of custom duties. The indirect taxes in 1926–7 brought in 27·9 per cent. of the revenue; and in 1927–8 27·2 per cent. Vodka, by the way, which is a Soviet Government monopoly, together with beer, is responsible in the Budget of 1927–8 for 18·5 per cent. of the total produce of taxes. (Compare Professor Procopovich's Bulletin.)

The last three chapters of Professor Haensel's book give us reliable information concerning local and communal taxation in Russia, an analysis of the income tax with its exemptions and privileges, and a description of the machinery of tax collection and tax inspection.

Professor Haensel's book will be read with great attention by all who are interested in Russian finance. He deals with the subject quite impartially and criticises, as far as it is possible to do so in the Soviet atmosphere, some of the Government measures;

[1] In income tax alone workers and Civil servants pay yearly 7·20—30 roubles; men engaged in home industries and liberal professions 12—42 roubles; in private trade 18—274 roubles (p. 51).

but he does not touch upon the general policy of the Government. Some of his points, such as, for instance, the official figures concerning wages in Russia or the percentage of private trade and its part in the turnover of the country, etc., are likely to arouse controversy, but they are, after all, of secondary importance in a treatise on finance. The book is an important contribution to contemporary literature on Russian finance, written by an authority of European reputation.

Der Staatshaushalt und das Finanzsystem Grossbritanniens. This article by Professor Haensel must be read in order to be appreciated. It gives a clear and compact history of Great Britain's finance since the Napoleonic wars and up to the present time, including even Mr. Churchill's last Budget. British readers will find this article both useful and interesting.

S. P. TURIN

London.

The Problem of Trust and Monopoly Control. By A. P. L. GORDON, B.A. (George Routledge and Sons, Ltd., London, 1928. Pp. viii + 186. 5*s.* net.)

THE author describes his book as "an attempt to analyse the proper relations between monopolistic combines and the State. Its method," he says, "is first to examine the German experience of organised monopoly." The scope of the book is, therefore, more limited than the title would lead us to expect, for it treats of only one class of monopolistic combinations, the Kartell, to the exclusion of the American and British system of comprehensive mergers, and, consequently, the author's second object, "to show how far it is possible to envisage a system favourable to the expansion of industry without disadvantage to the public, combining the security of monopoly with the stimulus of competition," cannot be regarded as completely attained.

The first part of the book, dealing with "the Kartell System of Modern Germany," takes us over familiar ground, and need not long detain us here. It is largely based on Liefmann's work and is succinct and lucid. To those unfamiliar with the subject it will serve as an admirable introduction, and, in addition to such well-known Kartells as those in the coal and iron industries, interesting particulars are given of the potash and textile Kartells among others. The second part treats of the "Problem of Legislation and Control," and its first chapter discusses the

general problems of legislation. We may imperfectly summarise the author's conclusions as to the principles of legislation in his own words: "Many methods of competition are manifestly unfair, and it is in their exclusion that the real problem of legislation exists. Broadly speaking, legitimate competition on the part of a Kartell is neither more nor less nocuous than competition of the same type undertaken by individual firms. . . . If legislation is to secure a maximum of productive efficiency it must aim at excluding all methods of competition which are invariably wasteful. . . . From the public standpoint a Kartell can only be justified if its existence results in real economies, whether in cheapening production or in avoiding trade depressions. . . . It must be the object of monopoly legislation to eliminate monopoly revenue while retaining the other benefits of combination."

The Kartell system had facilitated the transition from peace to war conditions of production. The number of Kartells increased during the war under compulsion, and grew still more in the first period of renewed peace. Political insecurity and the depreciation of the mark in 1920–22 caused many important Kartells to break down. Later, new capital became available, and "at first gradually, and subsequently with great rapidity, industry underwent a process of financial concentration, the object of which was to rationalise production, specialise plant, and facilitate research and the use of by-products." The rise in prices, for which the Kartells were in no way to blame, and discontent with the discrepancy between internal and export prices led to a demand for supervision, and ultimately in October, 1923, Dr. Stresemann obtained from the Reichstag an Enabling Act empowering the Government "to take such steps as it considered expedient and urgent in the financial, economic, and social spheres." A Decree (Kartellverordnung) was issued in the following month, which constituted a permanent machinery for the supervision of Kartells. It applied to both vertical and horizontal combinations, including agreements guaranteeing exclusive dealing, required all agreements as to prices, production, or markets to be in writing, and set up a Kartell Court to deal finally with all questions coming within its competence. The Court could determine whether an individual whose economic freedom was unduly restricted could withdraw from a Kartell, or whether the agreement should be declared void. Its consent was required for the imposition of penalties for breach of agreement and it had certain powers as to conditions of sale and

methods of price-fixing. The Decree itself is given in full in an appendix.

The eighth chapter, with twenty-three pages, expounds the working of the Decree and might well have been extended, since this is ground new to students. The provisions as to prices have acted mainly indirectly and prevented industrialists from attempting to protect themselves against a falling currency by raising prices. Most of the activity of the Court has been occupied with questions involving the right to withdraw from a Kartell. Mr. Gordon sums up the results of the decisions as follows: "In order to acquire the right to withdraw, a member of a Kartell must be able to prove that his existence is endangered, or his individual freedom unduly restricted, directly because of his membership. . . . The seceding member must be able to show—first, that the circumstances under which he signed the Kartell contract have subsequently ceased to apply; secondly, that the change of circumstances was not contemplated or provided for in the contract; and finally, that the new circumstances render an immediate withdrawal a condition of his ultimate survival." The Decree empowers the Court to take action to protect the economic life of the community as a whole against Kartell action, and so, *inter alia*, the imposition of boycotts and the grant of rebates for exclusive dealing are subject to its consent.

Another brief chapter, in which the book seems to rush to its conclusion, treats of the position in Great Britain of free trade and Kartells, and of the problem of control. The legal situation in this country may not unfairly be summed up by saying that the law will neither recognise Kartells nor protect the public against their action, but the legal decisions are by no means easy to harmonise. Mr. Gordon's plan of control is to establish a Combinations Commission on the lines of the German Kartell Court, composed of "a lawyer, one representative apiece from the Treasury, the Board of Trade and the Ministry of Labour, and three industrial representatives chosen from panels set up by the Board of Trade." The doctrine of restraint of trade should be amended so as to permit the legal recognition of voluntary combinations. The Commission would have powers to sanction withdrawals from combinations on the ground that the conditions imposed on the seceding party were unreasonable. Its sanction would be required for the imposition of boycotts and other penalties under the Kartell agreement. It should also hear appeals relating to unfair prices or discriminatory prices, and in such cases it should have power "to issue a general licence

for withdrawal, or to institute on its own behalf proceedings for an injunction to stay monopolistic extortion." The scheme is an interesting one, but it is insufficiently argued. Such terms as "unreasonable," "unfair," "extortion" are not self-defined; the decisions of the Commission might vary with its constitution and it might be driven to invent its own law as it went along. Its relations to the ordinary Law Courts are not made clear. Nevertheless, alike in this proposal and in his explanation of the German system, Mr. Gordon has made a useful contribution to the study of the problems arising out of industrial combination.

HENRY W. MACROSTY

Applied Economics. By R. T. BYE and W. W. HEWETT. (New York: A. Knopf. Pp. 655. 25s.)

THIS is another of the omnibus volumes which have recently been flowing so freely from the pens of American economists. The aim of the authors is to describe and analyse existing economic institutions and practices in order to suggest methods of increasing economic welfare. The book leads up to a final chapter in which "a constructive programme of economic progress" is laid down.

A plan as ambitious as this naturally postulates a belief in the minds of the authors that economic theory can be usefully employed in the determination of the lines along which social problems should be approached, and it is apparent that this book is put forward as a refutation, by example, of the idea that economic theory is of little immediate value in practical affairs. It is to be doubted, however, whether the authors have sufficiently appreciated the limitations of the science of economics as a basis, by itself, for detailed schemes for economic progress. So-called economic problems are very often not purely economic questions, and the economist must choose between refraining from having the last word or speaking on subjects on which he has no greater right to be heard than any other person whose interests are involved. Even when pure economic reasoning can suggest some desirable end which would increase economic welfare, the urgent and important practical problem is how quickly and to what degree that end should be pursued, and here, with the present limitations of economic analysis and power of measurement, the economist is wise to say nothing as an economist. Abstract reasoning leads to the conclusion, to take an important example, that a much greater equality in the distribution of wealth is desirable in industrial countries, but how quickly equalisation

should be produced, and at what point the process should cease, are important practical issues in which the method of trial and error is the only line of approach. The fundamental economic problems, indeed, are incapable of exact solution, since such solutions would demand standards which do not exist. What is to be the desirable balance of power between producers and consumers? What relative importance should be attached to the interests of the present generation and those of posterity? Economic problems differ from problems in mathematics in that the former are usually capable of an infinite and the latter of a limited number of solutions. For these reasons applied economics must, too often, either discuss questions with so many of the relevant factors segregated in the pound of *ceteris paribus* that the conclusions are of no immediate practical import, or arrive at findings which have merely transferred the unknown and indeterminable from one set of words to another.

These criticisms may be urged against the present work. Thus the authors attempt to establish a definition of economic welfare, some norm from which to measure the effects of given economic movements, in the words "the efficient production of a large and widely diffused income of beneficial goods." There appear, however, to be more indeterminate quantities in the definition than in the term itself. Would a 5 per cent. increase in production which was the cause of a 10 per cent. decrease in some index of the inequality in the distribution of income constitute an increase or decrease in economic welfare? What does "beneficial" mean in scientific quantities? Or, again, there is an attempt to lay down certain laws of consumption which will tend to maximise economic welfare. The last of these laws is, "Follow the habits of consumers which make good producers." Surely this law makes quite an arbitrary decision in favour of the utility provided by extra production as against the utility provided by "unproductive" consumption? Such a law would appear to recommend such habits on the part of consumers which would produce the mental atrophy which makes for the greatest content among mechanical workers.

The value of this book lies, therefore, in the careful collection of facts and theories in a wide range of economic topics. The actual information packed into the volume is encyclopædic; the presence of a very complete bibliography of recent English and American books makes it almost a work of reference.

Part II deals with the promotion of efficiency in production, and is an excellent summary of the grim facts of the economic

waste which persists in different forms. Part III treats of the organisation of exchange; efficiency in marketing; the control of the price system; public utility rates and banking; the stabilisation of trade and the monetary system. In a chapter on "International Debts" the authors support the idea of war debt cancellation. Part IV is concerned with the economic aspects of government, and draws from the wealth of experiments and experience of State interest in tariffs, trusts and the trade cycle in U.S.A. Part V is an analysis of the problem of inequality in the distribution of wealth. Part VI discusses the theories of Liberalism and Socialism and contains a brief account of the Russian experiment. The mass of material has, apparently, been compiled most carefully. There are very few slips.

On p. 165 the statement is made that, under the Industrial Courts Act of 1919 in Great Britain, "the Minister of Labour could . . . appoint a court of inquiry having the power to . . . call witnesses and demand information necessary to bring out all the facts of the dispute." The Minister has no power, however, to compel the attendance of either side in the dispute. On p. 418 the English Trade Board Act of 1909 is referred to as the Federal Trade Board Act. On p. 95 a catalogue of the advantages of trust formation appears to ignore the very powerful case which has been made against the reality of such advantages by E. Jones in his *The Trust Problem*.

JOHN JEWKES

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Manchester.

Getting and Spending at the Professional Standard of Living: A Study of the Costs of Living an Academic Life. By JESSICA B. PEIXOTTO. (New York: Macmillan Co., 1927.)

Getting and Spending at the Professional Standard of Living is a highly important contribution to a neglected field of economic research. Dr. Peixotto garnered her harvest of factual information from a section of the world remotely removed from the old-world centres of learning, yet typical in many respects of academic conditions found this side of the Atlantic—Berkeley, California. The author ably pleads the cause of the academician. Having for so long been set on a pedestal either to be ridiculed as a little peculiar in his social contacts or admired because of his eccentricities, the "Professor" now demands a standard of living compatible with his position in the social structure. The study made by Dr. Peixotto included ninety-six families of varying academic

rank, and shows in great detail actual expenditures incurred by this group over a period of one year. The value of this investigation lies very largely in the author's incisive observations. These add distinctly to the readableness of a book which in the hands of a less skilful scholar than Dr. Peixotto might have been made unspeakably dull. In the preface the author sets forth emphatically that "as a cost of living study, its immediate serviceability seems to be to show decisively that the salaries offered the faculty of the university under investigation, and in all probability the faculties of most universities, are below the amount required if an accepted standard of living for professional men is to be paid for out of those salaries." The author also reassures the reader that "the incentive to make this study of the way academic families live undoubtedly included an emotional interest. However, in plan at least, the investigation excluded both propaganda and special pleading." Dr. Peixotto fulfils this promise.

The evidence gathered by the author shows conclusively that those in the academic profession are far from overpaid, and that not a few of the academic families investigated might do better financially if the breadwinner were to turn his energies into other channels.

Studies similar to the one made by Dr. Peixotto should be undertaken in other countries and on a more extended scale in the United States. Such investigations would be of inestimable value to the economist. All academicians trained in the art of self-deprivation will feel a debt of gratitude to Dr. Peixotto for calling attention to the actual as well as the potential costs of living an academic life.

FELIX FLUGEL

University of California.

Standing Room Only? By EDWARD ALSWORTH ROSS. (Chapman and Hall. 1928. Pp. xvi + 368. 16*s*. net.)

LET no one be deterred from reading this book by its somewhat sensational title. It is one of the most valuable that have been published on this important subject. The author is, like a good many other recent writers on the same subject, an American—Professor of Sociology in the University of Wisconsin. It may at first seem remarkable that so many important books prompted by the apparent menace of over-population have issued from a country in which the population is still on the whole relatively sparse, and in which unquestionably there is still plenty of opportunity for development. But the fact is in itself evidence of the

reality and magnitude of the problem considered. Nowhere has population multiplied and land been brought under occupation more rapidly since Emerson in the 'sixties of last century loudly proclaimed the welcome that should be given in that country to people of every nation and colour. The rapidity of that movement cannot but suggest the inquiry as to whether there is to be any end to it and what will be the consequences, and this inquiry is further pointed by the fact that the movement is already relatively more rapid in the country immediately to the north. Little wonder, then, that some at least in North America should, as stated in the last number of the *Geographical Review* (New York), p. 354, " see in south-eastern Asia a vision of the future condition of their own continent and be troubled in mind, if not oppressed, by the thought of approaching population pressure, poverty, and weakness."

Though the book under review is not a long one, it may nevertheless be suggested that some of the chapters might have been omitted or greatly condensed without great loss, as dealing with matters that may now be taken as familiar to all interested in the subject, and whose relation to the subject is too obvious to need elaboration. The present reviewer would like to see in a future edition this course adopted with the first seven chapters, dealing with the modes in which population has been adapted to resources in the past and the degree in which the problem is in some ways (as by the conquest of disease) made even more threatening by the advance of civilisation. As to disease, for example, it might have been enough to give the pithy paragraph on pp. 35-6, summing up the results of the fight against disease in recent decades.

Most of the chapters following the seventh, those on the signs, the provocatives, and the penalties of population pressure, etc., contain much impressive matter, and all tend to drive home the seriousness of the world situation. The author's ultimate dependence is, like that of most of those who have given serious attention to the subject, on some method of adapting the population to the resources, not that of carrying out to the bitter end the struggle to adapt the resources to the population. The method advocated is what he calls " adaptive fertility," introducing this new term " because it is more certain that fertility will somehow be *adapted* to the situation which a people confronts than that ' birth-control ' (contraception) will be the method employed " (pp. 208–9, *n.*). But he is no more blind than the eugenists to the dangers of this method (pp. 271, 277–9).

The suggestion above made of the opportunity for condensation

had in view no shortening of the volume, but was made with the hope that the space saved thereby might be used for further original contributions by the author. The volume contains no definition of over-population, no discussion of the manner in which mere numbers affect the well-being of a community, and without such discussion there is no adequate reply to Dr. Oppenheimer's objection that Malthus's theory gives us no more than a formal application to every conceivable population movement with its accompaniments. It contains no discussion of the obscure conception of an optimum population now so frequently brought under our notice. The author reckons (p. 355) labour congestion as one of the signs of over-population. An exceptional proportion of unemployment may surely be taken as involving labour congestion. Now we are told that there was good reason to believe that in February or March this year the number of unemployed in the United States was about four million. Can we relate this, if true, to the optimum-population theory?

The first twenty-seven chapters of Prof. Ross's form one Part, entitled "Population." The remaining seven form the Second Part, entitled "International Migration." In this Second Part, though extending to little more than 70 pages, many will see the most important part of the volume. It is here that the author recognises the problem most explicitly as one of world-wide import, and involving in the end world-wide co-operation. And this is a fact that cannot be too strongly impressed and which will justify the appearance of many future volumes of like scope. In this Part Prof. Ross makes a strong defence of the exclusion of coloured races from the new countries of the whites. But he bases this defence not on any arrogant claim of racial superiority (p. 343), but on the injurious economic effects of admitting a large admixture of populations accustomed to a lower standard of living and prejudicial to the "likemindedness" which it is desirable to preserve so far as possible in any community (Chap. XXVIII). But in taking measures to secure this exclusion the greatest care should be taken to spare the feelings of the excluded peoples, and, by getting them to understand the true grounds of exclusion, to avoid occasions for rousing their hostility (pp. 351–2). And the author has the courage to look forward to the end, to a time when the coloured peoples of Asia and Africa will have accommodated themselves in every way to the demands of white civilisation. Then the barrier set up against them by the whites, having served its purpose, may be removed.

GEO. G. CHISHOLM

Über die Beziehungen zwischen Aussenhandel und Volkswohlstand. By W. SUSAT. (Jena: Fischer. Kieler Vorträge, No. 22.)

THIS provocative little pamphlet contains a lecture delivered by Herr Susat (Direktor im Statistichen Reichsamt) under the auspices of the "Institut für Weltwirtschaft und Seeverkehr" in the University of Kiel. It is a model of clear and interesting exposition.

The questions which Herr Susat asks are:—(1) To what extent can attempts to check imports and foster exports promote national welfare? (2) Is it possible to prohibit the importation of luxuries and ensure that raw materials are imported in place of them? Would such a prohibition bring about a "favourable" balance of trade and so contribute to the promotion of national prosperity? (3) Does an excess of imports tend to cause a decrease in national welfare? Is there any necessary connection between a surplus of exports and an increase in national welfare?

Throughout the greater part of his pamphlet Herr Susat is content merely to restate familiar doctrine in simple terms with the aid of well-chosen examples. But he tends to carry simplification too far. The province of economic theory into which he ventures has been the object of elaborate exploration within recent years. The bulk of Herr Susat's pamphlet might have been written by a contemporary of Bastiat. Sometimes the conclusions which Herr Susat draws—conclusions which *in themselves* may be unexceptionable—are more sweeping than his evidence warrants. The recent German attempt to stimulate exports and increase employment by granting credits to Russia may have failed. We cannot, however, conclude from this one instance of failure that *all* attempts to increase exports must prove abortive (pp. 17–19). Nor do Herr Susat's other examples prove that "*every* conscious attempt to influence foreign trade by artificial methods must be ineffectual" (p. 20).

The most valuable of Herr Susat's observations come towards the close of his lecture. "An excess of imports depends merely on the relation of capital accumulation to the demand for capital." "An excess of imports is only a symptom that the demand for capital exceeds the accumulation of capital" (two "short" statements which seem to require considerable qualification). "An effective influencing of the Balance of Trade can take place only if the cause—inadequate supply of capital—is removed." It is unfortunate that Herr Susat did not see fit to deal with these intricate questions at greater length. For a detailed examination

of them we might readily have sacrificed even the amusing account of the difficulties involved in the attempt to prohibit the importation of luxuries.

J. LEMBERGER

The University of Belfast.

Liberalismus. By LUDWIG MISES. (Jena: Gustav Fischer. Pp. 175. 7*m.*)

SEVEN years ago Professor Mises published a work the central thesis of which continental Socialists have found considerable difficulty in answering—*Die Gemeinwirtschaft.* This attack on Socialism has now been followed by an exposition of "Liberalism."

Professor Mises' essay makes curious reading to-day. It would have been regarded as extreme even if written seventy or eighty years ago. Compared with Professor Mises, the Philosophical Radicals of the 'forties seem mere time-servers. Liberalism, he tells us repeatedly, is the application to politics of a comprehensive, carefully elaborated social theory. Liberalism is wholly based on science, and its policy is merely the application of the conclusions of science. It strives to make reason effective in politics. Yet the one impression left on the reader's mind by this book is that Liberal policy must be always negative. The tasks which Liberal theory (according to Professor Mises) assigns to the State are to maintain the rights of private property, guarantee liberty and ensure peace. But liberty and peace are merely corollaries from and subordinate to the fundamental principle of private property. The recent tendencies of English Liberalism find no favour with so uncompromising an exponent of the true faith. His hostility to any form of State intervention in economic affairs is determined enough to satisfy even Sir Ernest Benn. Private ownership of the means of production, unrestricted by State action, alone makes possible a prosperous development of human society. The fact that there exists so much misery and want is no argument against Liberalism. Under modern conditions the free functioning of the institution of private property is no longer permitted. Professor Mises refuses to recognise any half-way house between Capitalism and Socialism. What he calls "Interventionismus"—carefully distinguished from "Liberalismus"—must prove futile in practice, if not definitely pernicious. But what is "Liberalismus"? We learn to our surprise that it is "the name for the doctrine which upholds the private ownership of the means of production." Or, again:

"That system of human co-operation which is based upon private ownership is called Liberalism or—since it has created an organised division of labour encompassing the whole world—Capitalism." Professor Mises claims for Liberalism that "it created the well-being of the nineteenth century, was responsible for the decrease of infant mortality, improved the standard of living and thereby prolonged life"—a varied combination of achievements.

J. LEMBERGER

The University of Belfast.

The Dying Peasant, and the Future of his Sons. By J. W. ROBERTSON SCOTT. (London: William & Norgate. 1926. Pp. xiii + 282. 10*s*. 6*d*. net.)

THE methods of the author of *The Dying Peasant* pass from the social vignette and the personal sketch to attempts to summarise the condition of agriculture, especially in regard to conditions of labour, by quotations of related experiences, judgments and points of view and the use of readily available statistics. Neither quotations nor statistics are used in their raw form. The author has taken care that all shall be assimilated and brought into accord with the general body of facts and ideas. While the work is pervaded by sentiment, no objection can be taken to the character of the feelings shown. They are not superficial or momentary, but are of a deep and permanent character and such as are shared by many people whose feelings regarding certain aspects of country life are not dulled by use and wont or overshadowed by interests.

There are nine appendices, occupying fifteen pages, in which an attempt has been made to reduce statistical information on the decline and present number of farm workers in Great Britain, and wages, to simple form. Apart from these, economic interest centres in the discussion of the standard of living of farm workers, and the discussion, "What does the labourer really earn?" Here are catholic collections of simple facts, ideas, and points of view, fused with a strong humanitarian interest. These sections would provide good general guidance for any student of living conditions in rural areas, and they would at least warn him of the possible errors of any form of measurement by isolated statistics. The discussion of rural trade unionism is also useful. Attention is given to housing both in its industrial and its social relations; while the economic, the psychological, and the general social causes of migration are indicated. The efficiency of farm workers is dealt with, especially in relation to the basis of physical capacity.

The method is pictorial rather than logical, and the apparent intention of the author was to provide a complete picture of the life of the farm worker and his family. Such a picture naturally includes the whole social landscape, and that is appropriate. No mere economic analysis of agricultural or rural conditions can show all the facts of country life or the principles underlying its organisation. While we wait for thoroughly objective books covering the same ground, there is a place for such books as this.

A. W. ASHBY

The Rural Industries of England and Wales. By HELEN E. FITZRANDOLPH and M. D. HAY. Four volumes. Agricultural Economics Research Institute, University of Oxford. (Oxford: Clarendon Press. 5*s*. net each.)

THE complexity of modern economic activities and organisation could scarcely be more strikingly set forth than by this study of rural industries in England and Wales. On a first impact the idea of rural industries seems to convey impressions of something like ideal simplicity. The worker is on the land, or at least in a village, working on raw materials at their point of production, perhaps himself also an agriculturist producing his own raw materials, selling articles of utility to near-by consumers, so economic organisation will be simple and conditions of work and life will satisfy all human needs. This is the expected appearance of things, but the facts are far otherwise. The basket-maker may grow his osiers, but some foreign lumber gang is cutting out timber from which the saw-mills will make competing boxes; or they will send their lumber on to the pulp-mills, and the carton emerges as the non-returnable empty competing with the basket. The Sussex woodman holding to his traditional craft may cut his rods in local woods for making barrel hoops, but a slump appears in the earthenware or hardware trades and his market disappears. Then a change in packing requirements for pottery may similarly affect the demand for the associated product of crate rods. The manufacture of industrial products may even move across the Channel or the ocean, and the woodman suffers with the manufacturer. Belgians find refuge in England during the war, and they carry back with them knowledge of methods and designs in the English basket trade and thus become dangerous competitors of the native workman. Household crocks, made of clay, may be made by small local firms for adjacent markets, but they fail financially through "cutting one another's throats in com-

petition." Some industries carried on in agricultural villages never had a rural origin; they were merely developments of large-scale industrial organisation in the utilisation of available labour.

The scope of these studies covers the manufacture of such varied articles as spilk baskets and trugs, barrel hoops and crate rods, fencing and hurdles, besoms and hay-rakes, with charcoal amongst the underwood industries; and turnery with furniture making, clogging and cooperage, amongst the industries using larger timber; and tannery using by-product. The wheelwright's shop and the smithy are treated with this group. Osier-growing, basketry, mat-making and other rush and sedge industries, and some straw products make an interesting group of lowland industries. Then the ancient art of preparing peat for fuel, some modern developments of other uses for peat, are treated side by side with outwork for factories. Decorative crafts include the making of lace of many kinds, glove-making, toy-making, weaving, and lapidary work, together with some of the ancient art of pottery and the still more ancient art of flint-knapping. In Wales the subjects include the making of the British coracle and the latest craze for handicraft products. The Welsh textile industry alone includes conditions existing previous to the Industrial Revolution and those of the latest and most adaptive of modern mills.

The general method of the studies is to indicate the geographical location of the industries and their connections with the production of raw materials, with labour supply, or with markets for products; then to describe processes and tools; following with a description of products and their uses and markets; and with a discussion of the conditions of the markets, and of prices, in relation to trade organisation, competing supplies, and other details. The supply and quality of workers, apprenticeship, wages and conditions of labour, and labour organisation, the general form of organisation of manufacture, and trading organisation if any, are also described and discussed in connection with all the larger trades.

The volumes give a detailed compendium of information on rural industries in all their variety of situation, product and organisation. They may be regarded as supplying the foundation of economic information which was, and perhaps is, urgently required. Without the technical and economic information here given, any discussion of the possibilities of development is bound to be, as it had hitherto been, of a futile character. More economic information might have been compiled and generalised if the

technical information which has now been collected had been available when this survey was started. In the prevailing circumstances, of lack of both technical and economic information, and of idealistic and sometimes mere sentimental propaganda, it appeared necessary to make the chief object that of describing, as fully as might be possible, the existing trades and their conditions. All the investigators should be congratulated on the way in which they obtained information on both technical and economic matters. It is not an easy task to learn the details of twenty or thirty industries from their raw materials, and even something of their agricultural basis to the conditions of competition in selling markets. Without exception as to persons, and almost without exception as to industries, these investigators succeeded. Could they have continued on the purely economic survey of these industries for another three years, England and Wales would possess a volume of economic information on its small industries such as no other nation can command. Even now these reports give an objectively detailed and accurate view of these small industries from 1921 to 1923 which is better than any obtainable for any other group of industries in Great Britain. If they were analysed for the extraction of the more purely economic information which they contain, and this could be generalised in a reasonably accurate way, a real service would be rendered to descriptive economics. As they stand, they provide a mine of information for important purposes of description and comparison. The sections on " general conditions and prospects " of each group of industries should be read by every person who wishes, for himself or for others, a return to what is supposed to be the simple economic life.

The existing rural industries require a greater supply of young workers, the workshops require better equipment, those in control must avail themselves of modern methods of organisation for buying raw materials and selling products, they need to study markets and their changes, above all the future is dependent upon enterprise and initiative of owners and workmen. " In the tangled thicket of problems every path leads ultimately to one point—that of education." Some of the existing industries will survive only as long as their present followers live, but others may develop.

As regards active social policy and endeavour, the present position is a little removed from that described in these volumes. The Rural Industries Bureau and the Rural Community Councils have stimulated into activity a number of craftsmen in a few

trades, and they have gathered some experience in methods of re-invigoration and revival. Yet even now it may be said, in general, that craftsmen's interest and faith are at a low ebb. The fundamental conditions of rural industries remain much as they were five years ago, and it is still worth while to understand and appreciate the nature of those conditions as it is analysed in these volumes.

A word of commendation should be given to the illustration and general make-up of these books. The clearness and regularity of type alone make them attractive. A. W. ASHBY

Eine Geschichte der wirtschaftlichen Entwicklung Englands. By LUJO BRENTANO. (Jena: Gustav Fischer. 1928. Vol. I, pp. viii + 396; Vol. II, pp. 453.)

CERTAIN aspects of economic development in mediæval England have long interested Prof. Brentano; on the problem of gilds, for example, he is still considered a writer whose views matter. Latterly, however, he has occupied himself with the whole gamut of the economic history of the country, principally in the form of lectures; and he has collected the substance of these lectures in two volumes, the one covering the Middle Ages, and the other, the sixteenth, seventeenth and eighteenth centuries. Brentano informs his readers that some of the lectures date as far back as 1872; it will require no little ingenuity to discover which these are, since the book as a whole is marked by a freshness of treatment which we have come to expect from so competent a past-master in economic history as Brentano.

There is no need to say that the author is acquainted with the results of the most reliable researches in English economic history, and while the two volumes are based on the work of others, the narration is Brentano's own. The story is clearly told. Brentano follows the usual lines, beginning with hoary antiquity—Celtic Britain, Roman Britain and the Anglo-Saxons (to each of these three he devotes a good deal of space), passing in review the feudal system, the growth of towns, the rise and decay of gilds, the development of the woollen industry, mediæval and mercantilist economic theory, the formation of the trading companies, and ending with the Industrial Revolution and its results. There is ample documentation throughout the book; indeed Brentano's acquaintance with the work of English authorities inspires the reader with confidence. Though he himself holds the view that the manorial system was already established in England when William

the Conqueror arrived, he yet makes clear the difference of opinion on the subject among historians of note. On even such details as the character of Edward III Brentano is well informed. He quotes on the one hand Stubbs, Tout and Unwin, who, as students will know, regard Edward III as no hero; and on the other, the two opinions of Cunningham, one in his great work, in praise of Edward III, and the other, in a letter to Unwin, admitting that his first view was erroneous. Brentano breaks a lance with Sombart in an excellent chapter on the Jews in mediæval England; and with the late Charles Gross, against whose criticism he defends himself, declaring that he stands by his conception of the English gilds which was first set forth in the Prefactory Essay to Toulmin Smith's Collection of Gild Ordinances. Controversy of this character is wholly welcome; indeed students will find it both stimulating and informative. The same cannot be said, however, of Brentano's anti-British polemics in regard to certain incidents of the Great War. Without passing any judgment on their appropriateness, it does seem that they are out of place in a work of scholarship. On reflection Brentano will surely admit that in the two passages in question (fortunately there are only two, on pp. 281 and 327 respectively) he has allowed the propagandist to run away with the historian. But these are minor blemishes which might well be removed in a second edition. An index would also add to the usefulness of the work, which German students will find to be an excellent primary text-book, and English students a supplementary treatise giving in a handy and compact form a reliable bird's-eye view of the whole field. M. EPSTEIN

The English Craft Gilds: Studies in their Progress and Decline. By STELLA KRAMER, Ph.D. (Humphrey Milford: Oxford University Press. 1927. Pp. xi + 228. 23s.)

THIS scholarly contribution is very welcome, for there is still ample room for careful work on mediæval economic history. Dr. Stella Kramer gives us three studies which have grown out of her earlier researches into the relations between the Government and the gilds in England. Such important and interrelated aspects of gild history as the causes and significance of the amalgamations among the mercantile crafts and the handicrafts, the conflicts between them, and the course and chief causes of their final decline are dealt with in considerable detail; the main thesis being that hitherto historians have not realised the importance and extent of the amalgamation movement among

English gilds. Dr. Kramer takes the view that in many places the gild merchant had practically ceased to function by the latter part of the fourteenth century, and that the merchants who were prominent members of such bodies, seeking to carry on some of their traditions, took the lead in the amalgamation movement. Various forms of organisation were adopted. In London and certain large boroughs it was possible to maintain several distinct gilds of merchants, differentiated according to the type of commodities sold; but "the great majority of English towns encouraged but one organisation for their pure traders." Thus, early in the fifteenth century, consolidated mercers' and merchant companies, often comprising grocers, apothecaries, drapers, haberdashers, ironmongers and goldsmiths, were becoming common. Smaller absorptions or amalgamations also took place, as when the haberdashers absorbed the hatters and cappers and later joined with the feltmakers; but this did not necessarily mean complete loss of gild identity. Very often each craft reserved the right to appoint from its own ranks a warden to watch its special interests.

With considerable emphasis Dr. Kramer asserts that "by the middle of the sixteenth century, if not indeed much earlier, amalgamated trading gilds were the rule in the English commercial communities, and there continued in active force" (pp. 38, 97). Neither Dr. Gross nor Professor Unwin took this view. The former thought that they were not very numerous; the latter, that they were not a general feature of English industrial organisation. Dr. Kramer suggests that Dr. Gross's under-statement is due to the distinction he drew between mercers' companies and companies of merchants; and that Unwin's distinction between companies of merchants and drapers' companies seems to have led to the same result. One imagines that the source of such differences of opinion may be discovered in the selection of certain small groups of gilds as typical. For instance, Dr. Gross discusses as typical merchant companies those of Carlisle and Alnwick, while Dr. Kramer, following up her criticism of Unwin, writes: "If conditions in Beverley and Shrewsbury can be considered typical of those which prevailed in the other English boroughs, the relations existing between the drapers and the other dealers seem to have been far more harmonious where drapers maintained their membership in the general mercantile society." But, when all is said, is it possible to place a finger upon typical gilds?

The handicrafts soon followed the merchants' example. In the leather industry Dr. Kramer distinguishes four leading kinds

of craft amalgamations, namely, "those of the tanners or curriers and cordwainers; of skinners and glovers; of leather-sellers, which included makers of different leather goods; and the large companies established in the smaller communities by gathering together all the leather crafts." Curious mixtures sometimes resulted. At Ipswich the metal crafts were indiscriminately jumbled with many others under the patronage of the tailors; the Dorchester (Dorset) fishmongers' company also comprised not only the victuallers but groups of building crafts; at Lancaster the weavers, fullers and dyers were combined with gardeners and salt-sellers, and the barber-surgeons were united with the plumbers, glaziers, saddlers, whitesmiths and cutlers. Finally, in at least two towns—Faversham and Wallingford—merchants and handicraftsmen were all gathered into one gild. It must have been very difficult to exercise effective control over such groups, and some explanation of their heterogeneous nature must be sought. It is at least feasible that the smaller gilds could not be choosers, and since it was dangerous to try to stand alone, they had to amalgamate with whom they could.

The movement was, of course, neither uniform nor entirely harmonious. The cloth-making gilds, for instance, seem to have been especially slow to amalgamate; while occasionally a reverse movement is discovered, in which gilds previously amalgamated are parting company. Moreover, while men in an expanding trade or handicraft were forming new gilds, others (like the armourers, bowyers and fletchers), who saw signs of a definite decline, would be eager to join hands with other gilds. Although they would show a united front to non-members, such as itinerant artisans and alien merchants, the gildsmen quarrelled constantly among themselves, and the majority were not above committing, for their own profit, the very trespasses which were the grounds of their complaints against others. Moreover, the whole position was greatly complicated by privileges, concessions and special exemptions granted, usually for a consideration, by authorities from the king downwards, often in clear conflict with general policy and statute law.

In her third study Dr. Kramer shows how desperately, but unsuccessfully, the gilds struggled to maintain their monopolistic hold upon local trade and industry. Certain local authorities aided them: some indeed went so far as to ignore the statutes authorising discharged soldiers and sailors "to set up and exercise, without let or molestation from any person whatsoever, such trades as they are apt and able for, even though they had not for

the space of seven years served an apprenticeship to the trade." But others encouraged outsiders at least so long as the interests of the whole community seemed to require it; or, uncertain of their powers, they took no action either way. At last the gilds themselves grew doubtful of the legality of their attempts to exclude or coerce non-members, for in a court of law they were liable to be defeated by the doctrine of restraint of trade. Furthermore, not only outsiders but gildsmen began to flout gild authority, especially in the eighteenth century. Gradually, by reason of abuses, lack of zeal, loss of confidence and efficient sanctions, the gilds' powers of search weakened and fell into desuetude; while widespread failure or wilful neglect to enforce apprenticeship regulations brought masters and journeymen into bitter conflict. Anyone who regrets the passing of the gilds will find the chapter on "Some Last Acts of the Gilds" melancholy reading.

Two conclusions previously reached by Dr. Kramer and other authorities are reinforced; namely, that conflict was an important force not only in the institution and progress of the English gilds, but also in their amalgamation and subsequent decline; and that governmental hostility and repression had relatively little to do with their final fate. Dr. Kramer's researches also re-emphasise the importance generally assigned to the competition of non-gildsmen working outside "the liberties" as a cause of the gilds' decay.

There is a good bibliography (pp. 211–22) of manuscript sources and books and articles consulted over a long period.

ALFRED PLUMMER

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Mercantilism and the East India Trade. By P. J. THOMAS, M.A., B.Litt. (London, P. S. King & Son. 1926. Pp. xvii + 176.)

As a definite and original contribution to British economic history by an Indian student, this book must be nearly, if not quite, unique. The broad fact that the development of economic thought in England was largely influenced by the controversies over the East India Company and its trade during the seventeenth and eighteenth centuries is sufficiently familiar; but much new light has been thrown on this matter by Mr. Thomas' explorations of the controversial literature published from 1623 to 1727.

In these conflicts the East India Company was attacked on two sides,—on one side by excluded merchants who denounced its

monopoly, and who finally, after a struggle lasting right through the eighteenth century, succeeded in destroying it; on the other side by those who attacked not so much the Company as the trade which it carried on. In this attack, again, two distinct issues were raised. Even in the very early years of the Company's existence it was discovered that the Indian trade could not be carried on without an export of bullion regarded as calamitous to the nation by almost all contemporary opinion; but the bullionist controversy which was thus provoked was mild and academic in comparison with that which began towards the end of the seventeenth century, provoked by the great increase in the importation of Indian cotton goods which took place when the Company established itself in Bengal. This is the controversy to which Mr. Thomas has chiefly directed his attention. He shows how varied were the forces arrayed against the activities of the Company. On national grounds it was attacked by Daniel Defoe and a host of pamphleteers; by degrees the great woollen and worsted industry was thoroughly alarmed; but the shock troops of the opposition were the silk weavers of Spitalfields. Among the special points of interest brought out by Mr. Thomas we may note the effectiveness of mob action in London in influencing legislation in the early part of the eighteenth century; and the effect of partial restrictions on importation of Indian cotton goods on the growth of the calico-printing industry. The wider question of the influence of Indian imports in creating a demand for cotton manufactures, and of the prohibition of that import in turning that demand to the profit of Lancashire, seems to be a promising field for further research.

GILBERT SLATER

A History of Railways in Ireland. By J. C. CONROY. (London: Longmans, Green & Co. Pp. viii + 386. 15*s*.)

THE series of monographs which are being prepared by the students of University College, Dublin, on different aspects of recent Irish economic history are to appear opportunely when so many difficulties present themselves to the new country. The first volume, by Mr. Conroy, deals with the history of both trunk and light railways just as the transport problem is entering a new phase in which past experience has seemingly little to teach us. It would be vain to say, however, that it has no lesson at all, as the problem of competition with and among railways is as old as the railways themselves in some of its fundamentals. Yet it is perhaps a pity that this, like many other general railway histories

written ostensibly for the student, should have emphasised their relation to the State to the virtual exclusion of all else. We are left with the suspicion that only the surface has been touched, and that the real economic history of the railways lies behind all the Acts and Parliamentary Reports. It is true that, particularly in the case of Ireland, the attitude of the State has seemed to overshadow other matters, but surely hardly so far as to compel a neglect of the main business of transportation. The rigid use of official sources naturally tends to cause this insistent emphasis, since contact with the State is the chief reason for their existence. Moreover, it has the unavoidable effect here of bringing in much that is English rather than Irish in essence. Within these limits the author has written a faithful descriptive account of the outstanding events in the political history of the railways during the last hundred years, and has brought them together in convenient form without putting forward any new point of view. Much of the first part is dull to a degree. Consecutive summaries of Reports, Acts and procedure, bereft of a strong thesis to bind them together or criticism to stimulate, form singularly barren reading.

Rather more interesting is the third part, describing the changes brought about since the "Partition," and certainly more venturesome is the concluding chapter in which the author at last cuts away from his official sources and speculates on the future. Much that he says here, especially with regard to the peculiarities of the Irish rail and road problems, is true and suggestive without being exhaustive of the subject. His calculations as to the wisdom or otherwise of electrifying the main lines, whilst obviously leading to the correct conclusions, are rather too much hedged about by questionable saving assumptions to be anything more than a broad ingenious use of statistical method. International comparisons would show up weakly if used on those parts of the system which are ripest for electrification. Nevertheless, there is some material for discussion in this last chapter, the book ending on a note far more stimulating than that in which it began.

C. D. CAMPBELL

Vom Wirtschaftsgeist in Amerika. By PROF. A. RÜHL. (Quelle und Meyer: Leipzig. 1927. Pp. 122.)

A VIEW of American economic life written by a German is particularly interesting by comparison with the numerous views of that country put forward every year by Englishmen. So many things seem to surprise Prof. Rühl which an Englishman

is perfectly accustomed to in his own country. The word "intellectual," complains Prof. Rühl, has become a term of contempt, and the American Universities are mere "athletic associations in which certain opportunities for study are offered to those physically weak." Prof. Rühl remarks also upon the standardisation and uniformity of American houses, clothes and food. There are "forty religions but only one sauce," he quotes from Brillat-Savarin. But to an Englishman familiar with the life of the majority of his countrymen, American life should appear less standardised.

The "homes" of the American skilled workers in the residential sections of the smaller cities are frequently occupier-owned or occupier-built, and far from uniform. The fashion changes every decade, from Gothic to colonial, from colonial to bungalow, and, as a rule, America avoids the horror of ribbons of semi-detached villas or of mass formations of all too solidly built slums. The American working woman or middle-class Hausfrau is a more enterprising and resourceful cook than her English counterpart, and Americans are spared the eternal routine of joints, boiled potatoes, greens, milk puddings, and such standard English adjuncts as "sudden death" pastries, and insipid synthetic mineral waters. In her clothes (though possibly not in his) the American shows more variety, and changes in fashion percolate down the income scale with greater rapidity. In his insistence on the uniformity of the material life of the American, Prof. Rühl shows only second-hand information.

But he realises clearly the fundamental paradox of the American's economic situation: many opportunities of rising up the ladder, but—a very steep ladder. The myth of the universal prosperity of America appears to be as widespread in Germany as it is in England, and Prof. Rühl's cleverly and popularly written little book should help to elucidate the truth. He quotes the statement of the Federal Commission on Industrial Relations, that only about a quarter of all American fathers of families were in a position to maintain a minimum standard of existence for their families without the help of other members, and that in New York one burial out of twelve was a pauper burial at public cost.

This Commission reported in 1915, but more recent investigations into the relation of cost of living and wages which Prof. Rühl might have quoted do not show any significant diminution in poverty. And without national health or unemployment insurance or old age pensions or even out-relief, as

Prof. Rühl points out, the position of the poor is nowhere so humiliating as in America.

This humiliation is intensified by America's psychological attitude, and here we enter upon Prof. Rühl's main theme. He discusses in successive chapters the social valuation of business, the American attitude to money, American business morals, and the new spirit in industry. Prof. Rühl writes in a lively fashion and draws freely upon the resources of American slang, the higher criticism of Mr. Menken, the "radical press," and the novels of Mr. Sinclair Lewis.

Prof. Rühl's analysis of the facts disclosed through these media is, on the whole, sound. He realises the implications of a capitalist system untrammelled by aristocratic, ecclesiastic or feudal traditions, and the consequences of honouring business above all other professions for the man of superior ability. The American business man is far more vocal than his European counterpart. Europe is full of Babbitts or potential Babbitts, but they are inglorious and mute. In America, on the contrary, they set the tone, and America follows their gross conception of progress, their quantitative standards (*Zahlenfetishmus*), and their strenuousness and contempt for idleness and leisure.

But the primacy of business as a career has its compensations. The American business man is a finer selection. He is not so petty and niggling as his European counterpart. He is more generous in endowing learning or in accepting a daughter-in-law without "dot," and he is often convinced that his business is for the service of mankind, or at least for the advantage of his customers and employees.

Yet "no great fundamental discovery has originated in America, unless perhaps the short story," and Prof. Rühl is moved to inquire into the prospects of a more creative future. He sees a distinct change (and well he may !) from the Puritan Sunday of New England, which even Scotchmen found dull, and his last chapter is devoted to modern American "Kulturkritik," the awakening of a critical attitude in America to her own civilisation.

P. SARGANT FLORENCE

Modern Japan and its Problems. By G. C. ALLEN, M.Com., Ph.D. (George Allen & Unwin, Ltd. 10*s*.)

A PERIOD of three years' residence in the Far East has convinced me that the foreigner there is seldom unprejudiced;

many business men dislike any roguery in which they are untrained, and also tend to make ill-considered political judgments; missionaries and teachers tend to idealise, and many foreigners do not trouble to think very deeply. It is satisfying, therefore, to be introduced to this book by Mr. Allen, who steadily avoids what he describes as " The Fiction of the Yellow Peril " and " The Cherry Blossom Delusion," and gives a carefully reasoned and eminently readable account of many aspects of his subject.

Emphasis is justly laid on the national love of compromise, and on the family system and its logical parallel, the paternal state. The love of compromise has often led to misunderstandings between Japanese and foreigners, and the author is of the opinion that it is largely responsible for the common idea that Japanese are untrustworthy; he attributes this to lack of understanding. The Anglo-Saxons are perhaps the most uncompromising of people in commercial matters, but a Japanese in China, suing an American Company enjoying extra-territorial rights and registered in, say, Florida, or becoming, in England, involved in leaseholds, might readily suspect the law of those countries of encouraging chicanery.

The family system carries with it a fairly complete substitute for poor relief, and health and unemployment insurance. This is aided by the fact that employees are not, in most industries, liable to sudden dismissal without compensation merely on the grounds of lack of work; further, labour is more mobile and is not hampered in its mobility by Trade Union restrictions. All this tends to level out the peaks of trade crises.

Modern Japan can be said to have had its beginnings in 1854, when foreign concessions were first granted, but more definitely in 1868, when a complete revolution was started of everything that required changing to put Japan on a level with Western nations. Mr. Allen makes a great point of the advantageous position of Japan in conducting this revolution. At a time when endless spade-work had been done by the individualistic West, and *laissez-faire* was beginning to be discredited, the Japanese, who by tradition and social organisation were trained in co-operation and expected State initiative and control, started to build up industries financed, and fathered in every way, by the Government that had deliberately planned the change. The capacity of the Japanese for co-operation is well illustrated by their formation of a Cotton Importers' Association, which obtained valuable concessions from all shipping lines for the raw cotton imported from India. So successful was this Association, that a similar one was

formed in China, as a result of Japanese initiative, embracing all nationalities concerned.

Although the whole of the book is interesting and well balanced, in its attention to past history, the present, comparisons with other countries, and occasional anticipations, the most valuable chapters to readers of this JOURNAL will probably be those entitled "Banking and Finance" and "The Population Problem." As far as the reviewer is aware, these chapters are the only studies available of their respective subjects, particularly if the former is read in conjunction with the same author's article published in the ECONOMIC JOURNAL in March 1925.

This history of the banks, the object with which each was created and on what Western example it was modelled, and the success or failure of each experiment are well recounted. Some of the banks have been largely tools in political action, and, succeeding in this function, have failed in other directions. The Bank of Japan has failed entirely to control credit policy, and its position is summed up as follows:

> "Thus the Bank of Japan appears mainly as an institution for currency control, for the conduct of official financial business and for help in emergencies. It has never aimed at providing the money market with funds in normal times. Until, however, it is able to get into closer touch with the other banks, its rate will remain merely nominal, and can never hope to become a controlling one."

In his study of the problem of Japan's rapidly increasing population he shows how all the available suitable land in the country is now under rice cultivation, and how intensive work and external aid have by now brought the rice harvest to very nearly the maximum possible, while imported rice is unpalatable to the Japanese. A decrease in the high birth-rate is unlikely, because the social organisation, the position of women, ancestor worship and the policy of the Government are all combined in encouraging a high rate. Emigration is denied by Canada, America and Australia, while China, Korea and Formosa have endless indigenous cheap labour available. The solution of the problem is a change of diet, involving imports of food, which can be paid for only by exports of manufactured goods. The main exports at present are silk and cotton. Mr. Allen thinks the silk market of America is safe unless fashions change, as he does not anticipate loss of revenue through competition from Chinese or artificial silk.[1]

[1] See article by Mr. Johnes, ECONOMIC JOURNAL, March 1928.

The reviewer (with, perhaps, as little knowledge as the author of fashion changes in America) inclines to the opposite view of this. The cotton exports are absorbed mainly by China and India, and home manufacture in those countries may damage Japanese exports as much as these have damaged Lancashire exports. No mention is made of the encouragement given to this by the establishing with Japanese capital of large cotton mills in China.

In his last chapter, " Japan and the West," Mr. Allen touches on many subjects, and makes a powerful plea for a better understanding, which his sympathetic and lively book should certainly do something to encourage.

C. A. ASHLEY

NOTES AND MEMORANDA

Bilateral Monopoly

In the *Archiv für Sozialwissenschaft und Sozialpolitik* (Band 58, Heft 2) Professor Schumpeter reproduces the late Dr. A. K. Wicksell's last published writing, which was a criticism of my *Mathematical Groundwork of Economics*, with an introduction appreciating Wicksell's life-work and discussing the criticism. In particular he calls attention to Wicksell's treatment of bilateral monopoly, which he considers of great importance; this treatment was a rather incomplete note on the short paragraph I devoted to the subject (*Groundwork*, p. 62), and it is the object of this paper to develop the idea that Wicksell introduced.

The problem may be stated as follows. Let $p = f(x)$ be the consumer's demand curve for a commodity, say steel. Let there be only one producer, who has a complete monopoly, and only one factor of supply, say iron ore, of which one mine-owner has complete monopoly.[1] Let one unit of ore be needed for one unit of steel. Write $\pi = \phi(x)$ for the cost schedule of ore production, subject to constant or decreasing returns. The steel-maker then aims at maximising $\{f(x) - \pi\}x$, where π is the price he pays for ore, and the mine-owner aims at maximising $\{\pi - \phi(x)\}x$. My statement was that " there may be a value of π for which [the same value of x is obtained from both maximising equations], but without collusion it will not be obtained," and that the solution is indeterminate. Wicksell remarks (*loc. cit.*, p. 276) that he does not understand this, and gives the solution of Case 2 that follows, introducing what I have called the " manufacturer's demand curve," but only in the case where the cost, $\phi(x)$, is zero for all values of x, and labour is the sole factor. He concludes that the supplier of the factor reaches an actual (*Wirkliches*) maximum, and the employer a relative maximum, and calls attention to the great importance of the problem.

It appears to me that Wicksell's solution is one-sided, and that equally the employer may reach a real maximum and the supplier a relative maximum, with consequences that are developed in the sequel.

[1] The analysis includes the case where the steel-maker has also fixed charges and uses other unmonopolised materials.

The analysis is essentially algebraic, but it can be represented graphically, and it will be convenient to readers to place the geometry first. For simplicity the supply and demand curves are drawn as straight lines, and in some cases a corresponding simplification is made in the algebra, but the assumption of rectilinearity is not necessary.

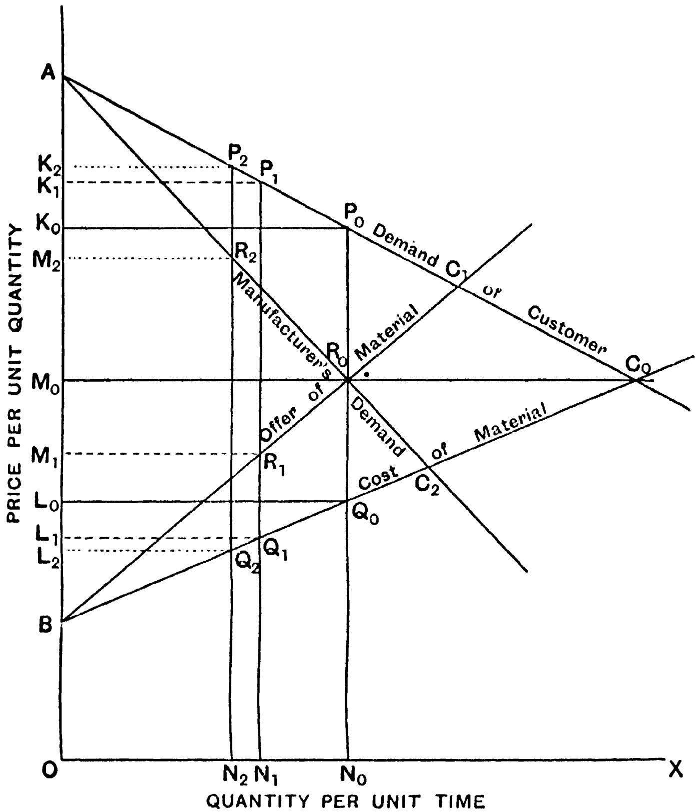

Fig. 1.

On a horizontal axis, OX, take any scale for quantity of output per week or per other time unit. Choose the measures of the material and product so that one unit of material is used in one unit of product. Represent prices per unit vertically (Fig. 1).

The straight line AC_0 represents the demand of the customer for the product, so that ON_1 units will be bought at a price N_1P_1.

The straight line BC_0 represents the cost of the material, so that if ON_1 units are produced their average cost will be N_1Q_1.

Draw a horizontal line through C_0 to meet the vertical axis at M_0, and bisect C_0M_0 at R_0.

Join AR_0 and produce to meet BC_0 at C_2, and join BR_0 and produce to meet AC_0 at C_1.

Through R_0 draw a vertical to meet OX, BC_0 and AC_0 at N_0, Q_0, P_0. Draw horizontal lines through Q_0 and P_0 to meet the vertical axis at L_0 and K_0.

Bisect C_1A at P_1, draw a vertical through P_1 to meet BC_1, BC_0 and OX at R_1, Q_1, N_1; draw horizontal lines through P_1, R_1, Q_1, to meet the vertical axis at K_1, M_1, L_1.

Finally, bisect C_2B at Q_2, draw a vertical through Q_2 to meet OX, AC_2 and AC_0 at N_2, R_2, P_2, and draw horizontal lines through Q_2, R_2, P_2 to meet the vertical axis at L_2, M_2, K_2.

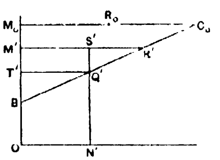

FIG. 2.

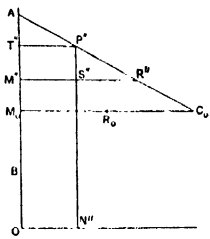

FIG. 3.

Case I. Suppose that the manufacturer can dictate the price of the material, while the producer of the material decides the output.

Let him assign any price OM' (Fig. 2). Through M' draw a horizontal line to meet BC_0 at R'. Take any point N' on OX, and draw a vertical to meet BR', $M'R'$, at Q', S'. With output ON' the supplier of the material makes a profit represented by $Q'S'M'T'$. Given OM', this rectangle is greatest when S' is the middle point of $M'R'$, and therefore S' lies on BR_0.

As OM' varies, different points on BR_0 mark the quantity and price of the material produced, and BR_0 may be called the offer line (or schedule) of material.

The manufacturer is then in the position of a monopolist whose cost price is given (Fig. 1) by BC_1 and selling price by AC_1 and he is free to choose any point on BC_1. His greatest gain is when he chooses R_1, the middle point of BC_1, and his gain then is represented by the rectangle $R_1P_1K_1M_1$. At the

same price the gain of the supplier of the material is represented by $R_1Q_1L_1M_1$. The ratio of these rectangles is

$$R_1P_1 : R_1Q_1 = BA : BM_1.$$

Case II. Suppose that the supplier of the material can dictate its price, while the manufacturer decides the output.

Let him assign any price OM″ (Fig. 3). Through M″ draw a horizontal line to meet AC_0 at R″. Take any point N″ on OX and draw a vertical to meet AR″, M″R″ at P″, S″. The manufacturer then makes a profit represented by S″P″T″M″, which is a maximum when N″ is so chosen that S″ is the middle point of M″R″ and therefore on the line AR_0. Hence, whatever price is set, points on the line AR_0 connect price and output. AR_0 may then be called the manufacturer's demand line for material.

The supplier of the material is then in the position of a monopolist whose cost price is given by BC_2 (Fig. 1) and selling price by AC_2, and he is free to choose any point on BC_2. His greatest gain is when he chooses R_2, the middle point of AC_2, and his gain then is represented by $R_2Q_2L_2M_2$. At the same price the manufacturer's gain is represented by $R_2P_2K_2M_2$. The ratio of these rectangles is $Q_2R_2 : R_2P_2 = AB : AM_2$.

Case III. If the manufacturer and supplier of material combine, their joint gain is determined by a rectangle set in the triangle AC_0B. It is greatest at the output ON_0, since P_0 and Q_0 bisect AC_0 and BC_0. The joint gain is $P_0Q_0L_0K_0$.

With the output ON_0 both the manufacturer's demand curve and the material offer curve are satisfied by the material's price N_0R_0, and their gains are in the ratio $AM_0 : BM_0$.

If BC_0 is horizontal (constant cost) the supplier of the material makes no gain, and will not agree to the arrangement if he has any bargaining power.

Algebraic Analysis

Write $f(x) = a - m_1x$, and $\phi(x) = b + m_2x$, when approximate values are used.

Case I. Suppose that the manufacturer can dictate the price of the material, π.

The supplier of the material offers x units, where x maximises $(\pi - \phi(x))x$, π being given.

x must satisfy the equation $\pi = \phi(x) + x\phi'(x) = b + 2m_2x$.

This curve in π, x, represented by BC_1, may be called the offer schedule.

The supplier's gain is then $x^2 . \phi'(x) = V_1$, say.

The manufacturer is then limited by the offer schedule and the customer's demand, and dictates that value of π which will maximise $(p - \pi)x = \{f(x) - \phi(x) - x\phi'(x)\}x$.

x must then satisfy

$$f(x) - \phi(x) - 3x\phi'(x) + xf'(x) - x^2\phi''(x) = 0,$$

and when this is solved π is determined from the offer schedule.

The manufacturer's gain is then

$$x^2\{2\phi'(x) - f'(x) + x\phi''(x)\} = U_1, \text{ say.}$$

Then $$\frac{U_1}{V_1} = \{2\phi'(x) - f'(x) + x\phi''(x)\} \div \phi'(x)$$

$$= \frac{2m_2 + m_1}{m_2}, \text{ approximately.}$$

In the figure, $ON_1 = x = (a - b) \div 2(m_1 + 2m_2)$,

$N_1R_1 = \pi = \{m_2a + (m_1 + m_2)b\} \div (m_1 + 2m_2)$,

$U_1 = M_1R_1P_1K_1$, $V_1 = M_1R_1Q_1L_1$,

$U_1 = (a - b)^2 \div 4(m_1 + 2m_2)$, $V_1 = (a - b)^2 m_2 \div 4(m_1 + 2m_2)^2$.

Case 2. Suppose that the supplier of the material can dictate its price, π, to the manufacturer.

The manufacturer maximises $(p - \pi)x = \{f(x) - \pi\}x$, for a given π, so that x satisfies $\pi = f(x) + xf'(x) = a - 2m_1x$.

This curve in π, x, represented by AC_2, may be called the manufacturer's demand schedule.

The manufacturer's gain is then $-x^2 . f'(x) = U_2$, say.

The supplier is then limited by the manufacturer's demand schedule and his own cost schedule, and dictates that value of π which will maximise $(\pi - \phi(x))x = \{f(x) + xf'(x) - \phi(x)\}x$.

x must then satisfy

$$f(x) - \phi(x) + 3xf'(x) - x\phi'(x) + x^2f''(x) = 0,$$

and when this is solved π is determined from the manufacturer's demand schedule.

The supplier's gain is then

$$x^2\{-2f'(x) + \phi'(x) - xf''(x)\} = V_2, \text{ say.}$$

Then $$\frac{V_2}{U_2} = \{-2f'(x) + \phi'(x) - xf''(x)\} \div -f'(x)$$

$$= \frac{2m_1 + m_2}{m_1}, \text{ approximately.}$$

In the figure, $ON_2 = x = (a - b) \div 2(2m_1 + m_2)$,

$N_2R_2 = \pi = \{(m_1 + m_2)a + m_1b\} \div (2m_1 + m_2)$,

$U_2 = M_2R_2P_2K_2$, $V_2 = M_2R_2Q_2L_2$,

$U_2 = (a - b)^2 m_1 \div 4(2m_1 + m_2)^2$, $V_2 = (a - b)^2 \div 4(2m_1 + m_2)$.

Case 3. Suppose that the manufacturer and supplier of material combine to maximise their joint gain.

x must be chosen so as to maximise $\{f(x) - \phi(x)\}x$, so that x satisfies $x\{\phi'(x) - f'(x)\} = f(x) - \phi(x)$.

The aggregate gain is then $x^2\{\phi'(x) - f'(x)\}$.

Let $x = x_0$ be the solution, so that

$$f(x_0) + x_0f'(x_0) = \phi(x_0) + x_0\phi'(x_0).$$

Thus it appears that x_0 is the quantity (ON_0) determined by the intersection of the manufacturer's demand curve and the supplier's offer curve, so that if the value of π (N_0R_0) determined by this intersection were fixed by an outside arbitrator, manufacturer and supplier would both maximise their gains (at this value of π) by the same quantity x_0. This is not, however, a position of stable equilibrium. It would be to the interest of the manufacturer to push π down towards R_1, and of the supplier to push it up to R_2.

At the position R_0, the manufacturers gain is

$(p - \pi)x_0 = \{f(x_0) - f(x_0) - x_0f'(x_0)\}x_0 = -x_0^2 . f'(x_0) = U_0$, say, and the supplier's gain is $x_0^2 . \phi'(x_0) = V_0$.

Hence $\quad \dfrac{U_0}{V_0} = \dfrac{-f'(x_0)}{\phi'(x_0)} = \dfrac{m_1}{m_2}$, approximately.

$$ON_0 = x_0 = (a - b) \div 2(m_1 + m_2),$$
$$N_0R_0 = \pi = (m_2a + m_1b) \div (m_1 + m_2),$$
$$U_0 = M_0R_0P_0K_0,\ V_0 = M_0R_0Q_0L_0,$$
$$U_0 = (a - b)^2m_1 \div 4(m_1 + m_2)^2,\ V_0 = (a - b)^2m_2 \div 4(m_1 + m_2)^2.$$

If we take $y = f(x)$ and $y = \phi(x)$ as straight lines, the following statements hold.

$U_0 + V_0$ is always greater than $U_1 + V_1$ or $U_2 + V_2$.

If m_2 is positive it is easily shown, if $f''(x)$ and $\phi''(x)$ are neglected, that

$$U_1 > U_0 > U_2, \text{ and } V_2 > V_0 > V_1,$$

and that x_0 is greater than x_1 or x_2.

If $m_1 = m_2 = m$, then $x_1 = x_2 = (a - b) \div 6m$, and

$$U_1 = V_2 = (a - b)^2 \div 12m,\ U_2 = V_1 = (a - b)^2 \div 36m,$$
$$U_1 + V_1 = U_2 + V_2 = (a - b)^2 \div 9m,\ U_0 + V_0 = (a - b)^2 \div 8m.$$
$$U_0 = V_0 = (a - b)^2 \div 16m.$$

If $m_2 = 0$ (constant cost), N_1 and N_0 coincide, $x_0 = (a - b) \div 2m_1$, and $ON_2 = (a - b) \div 4m_1$.

Further, $V_0 = V_1 = 0$, $U_0 = U_1 = (a - b)^2 \div 4m_1$;

$$U_2 = (a - b)^2 \div 16m_1,\ V_2 = (a - b)^2 \div 8m_1.$$

This is essentially the case that Wicksell discussed.

If m_2 is negative, and the cost function linear, the value of x which satisfies $\pi = \phi(x) + x\phi'(x)$ leads to a minimum gain instead of a maximum, and the analysis of Cases 1 and 3 become complicated. Case 2, however, is unchanged substantially so long as $2m_1 > -m_2$.

The analysis can at once be extended to include the conditions that the manufacturer is subject to a fixed charge (*e.g.* rent or taxes) irrespective of output, which merely diminishes his gain without affecting the points N_0, N_1, N_2; and further that he has other costs (*e.g.* coal) proportional to his output, say kx, for to meet this condition we have simply to write $k + m_1$ for m_1 throughout.

Besides this extension, however, we can readily solve Case 3 when the manufacturer uses a number of materials, each the subject of an independent monopoly.

Write $\phi_1(x)$, $\phi_2(x)$ . . . for the cost functions of the materials, and π_1, π_2 . . . for the prices at which the manufacturer obtains them.

The maximum gain for all combined is then

$$\{f(x) - \phi_1(x) - \phi_2(x) - \ .\ .\ .\}x,$$

where x satisfies

$$f(x) - \phi_1(x) - \phi_2(x) - \ .\ .\ . = x\{\phi_1'(x) + \phi_2'(x) + \ .\ .\ . - f_1'(x)\}.$$

The manufacturer's demand schedule is

$$\pi_1 + \pi_2 + \ .\ .\ . = f(x) + xf'(x).$$

The offer schedules are $\pi_1 = \phi_1(x) + x\phi_1'(x)$,

$$\pi_2 = \phi_2(x) + x\phi_2'(x).$$

As before, these can all be satisfied by the same value $x = x_0$,

where $\quad x_0 = \dfrac{a - b_1 - b_2 - \ .\ .\ .}{2(m_1 + m_2 + m_3 + \ .\ .\ .)}$, approximately,

if $\quad \phi_1(x) = b_1 + m_2x$, $\phi_2(x) = b_2 + m_3x$, etc.

The gains of the manufacturer and of the suppliers of the materials are x_0^2 multiplied respectively by $-f'(x_0)$, $\phi_1(x_0)$, $\phi_2(x_0)$. . . .

Labour Monopoly

Now consider the supply, not of a material, but of labour controlled by a monopolistic Trade Union.

The clearest method of approach is to suppose that there is no reserve price for labour, and no increasing disutility, but that a certain number of men are available whose production per

X X 2

head per diem yields unit commodity. That is, we take $b = 0 = m_2$, but that there is a superior limit to x.

The employer can decide on the amount to be produced, whatever the price of labour.

If the Trade Union can dictate the wage we have Case 2. To fix ideas take the case of coal-owners and miners, ignoring all other costs and classes of labour, and write the consumer's demand for coal per diem as

$$p = 12 - \frac{x}{15{,}000}$$

in shillings and tons. Suppose that each miner produces 1 ton daily.

We have the following schedule:

Daily Coal Output

Amount (tons, 000's). x	Wage (shillings). π	Price (shillings). p	Owner's gain (shillings, 000's).	Aggregate Wages (shillings, 000's).	Unemployment Benefit (shillings, 000's).
60	4	8	240	240	—
$52\frac{1}{2}$	5	$8\frac{1}{2}$	$183\frac{3}{4}$	$262\frac{1}{2}$	—
45	6	9	135	270	15
$37\frac{1}{2}$	7	$9\frac{1}{2}$	$93\frac{3}{4}$	$262\frac{1}{2}$	$37\frac{1}{2}$
$33\frac{3}{4}$	$7\frac{1}{2}$	$9\frac{3}{4}$	$75\frac{15}{16}$	$253\frac{1}{8}$	$48\frac{3}{4}$
30	8	10	60	240	60

Here $\pi = 12 - \frac{x}{7{,}500}$, is the employer's demand schedule.

The maximum of wages is when $x = a \div 4m_1 = 45{,}000$, $\pi = \frac{a}{2} = 6$.

Suppose that there are 50,000 miners in the Trade Union. All will be employed at $p = 8\frac{2}{3}$, $\pi = 5\frac{1}{3}$. The average earnings per head in 10 days will be 53*s*. 4*d*.

This average can be increased to 54*s*. with average unemployment one day in 10. If unemployment benefit at 3*s*. a day is paid, total receipts are 57*s*. per 10 days.

But allowing for unemployment benefit it is easy to show that maximum receipts would be obtained at a wage 7*s*. 6*d*. a day. At this rate 33,750 would be employed; average unemployment would be 13 days in 40, and receipts would be per 10 days 50*s*. $7\frac{1}{2}$*d*. wages plus 9*s*. 9*d*. benefit, that is, 60*s*. $4\frac{1}{2}$*d*.

If then the Trade Union aims at complete employment the wage should be fixed at 5*s*. 4*d*.; if at maximum earnings, at 6*s*.;

if at maximum receipts including unemployment benefit, at 7*s*. 6*d*.

If there were only 30,000 miners, maximum average earnings are 8*s*. a day, all employed, and no more could be obtained by reducing employment and drawing benefit. If the miners increased their hours and raised output by 10 per cent., the wage per ton would be 7·6*s*., and the daily receipts 8·36*s*., say 8*s*. 4*d*. The earnings for the additional 2 cwts. would be only 4*d*.

Next take Case 1, where the employer can dictate wages. His interest is to drive wages down as far as possible. If there is a legal minimum not greater than 8*s*. 8*d*. a ton he could employ the 50,000 at that minimum, but would make no gain; and he would maximise his gain if he employed only 25,000, when $p = 10\frac{1}{3}$, and the gain would be 1*s*. 8*d*. per ton. He would only employ the whole 50,000 if he could pay as little as 5*s*. 4*d*.

It is clear that in the usual position where neither employer nor employed have absolute power, there is no definite solution. But if the facts were as supposed, an arbitrator would be able to work within narrow limits.

[The illustration would be more apposite if it were re-worked from the equation $p = 18 - \frac{x}{10{,}000}$, with unemployed benefit at 4*s*. 6*d*. The values of x would be unaffected but all money values would be raised 50 per cent.]

A. L. BOWLEY

UNEMPLOYMENT IN THE MADRAS PRESIDENCY

IN a Note on "Unemployment in the Madras Presidency," published in the ECONOMIC JOURNAL, March 1928 (p. 138), Professor A. J. Saunders has overlooked one important aspect of the problem, and has misunderstood some other aspects, which need clearing up. Though he was a member of the Committee appointed to investigate the question of unemployment among the so-call "educated middle classes," neither he nor the other members of the Committee seem to have appreciated what the term "educated middle classes" should predicate. It certainly could not have been intended to comprise all Graduates, Intermediates and S.S.L.Cs., as the Professor seems to think; for if it was, the appropriate term would be "educated classes," and not "educated middle classes." The educated as well as uneducated members of the poorer classes, who in this part of India (the Madras Presidency) are more or less identical with the lower

castes of Hindu society such as the lower grade *Sudras* and *Panchamas* (the latter are the well-known "depressed classes"), would certainly not come within the term. Among these there is absolutely no case of unemployment at all. It has long been the policy of the Government of Madras to encourage the uplift of these communities as well as Indian–Christians and Mohamedans by giving even the least educated among them preference in Government service over the members of the higher caste Hindus with equal or even superior qualifications; so that there has never been any instance of unemployment of educated men among these classes. But educational advance among them (except in the case of Indian–Christians who are looked after by the various foreign Christian Missions here) has been very poor. As the Professor himself must know from his experience and knowledge, educated men in Southern India consist mostly of Brahmins and higher grade non-Brahmins, and it is only among these that unemployment may be said to exist to any appreciable degree. But a new situation has been created since the introduction of the Reforms in 1921, which by widening the electoral franchise among the population, consisting mostly of non-Brahmins, inevitably brought about the ascendancy of the numerically strong section, the higher caste non-Brahmins. to political power in the Presidency. The Administration, in so far as it has been transferred to the representatives of the people, is consequently now actually under the control of non-Brahmin leaders. The result is that, finding that the Brahmins have in the past practically monopolised the Government services out of all proportion to their numbers, Government has now been made to pursue a systematic policy of communal representation in the services, under which non-Brahmins are to be given preference over Brahmins with equal or even superior qualifications in all Government posts, until the proportion gets equalised to that of the population of each class. As the educated men of Southern India at the present moment are mostly of the Brahmin class (among whom almost all, whether poor or rich, are literate), this policy of communal representation in the services practically confines the problem of unemployment to the Brahmin class alone. Neither the Professor nor the Committee in its Report shows any awareness of this fact, though the communal force is a determining factor in the matter of employment of educated men, and in fact the one conspicuous feature of economic and social as well as political life in Southern India to-day.

Another point not understood by the Professor in his Note

and the Committee in its Report is that in actual practice there is no unemployment at all among the higher ranks of educated men—Graduates and Intermediates and that all unemployment is confined actually to those who have received merely a High School education, *i.e.*, holders of Secondary School Leaving Certificates (S.S.L.C's.), and others with lower education. The former, *i.e.* Graduates and Intermediates, are always able to compete effectively with the latter and oust them from the competitive struggle (except in so far as communal preference governs the situation). It is only large numbers of these low-grade educated men, especially of the Brahmin class, that are really suffering from unemployment. In a Memorandum submitted to the Committee, I have shown in detail how these people can be usefully absorbed by the Postal and Police Departments of Government, if these latter pursue a policy of entertaining only educated and more-responsibility-feeling postmen and constables respectively. At present the Postal Department is giving high pay to postmen, and the Postmaster of the city of Madras has already taken to the policy of inviting " School Final " men to his Department by offering decent pay and giving greater chances of promotion to higher posts in cases of proved efficiency. The Police Administration in the Madras Presidency is at present one of the worst imaginable and is very inefficient, the main reason for this being the illiteracy of its constabulary. Ninety-nine per cent. of the constables are not English-educated and do not know the law, and they are low paid—average salary being not more than Rs. 20 (30 shillings) a month. If the pay is raised to Rs. 30 or Rs. 35, and good chances of promotion to higher ranks are afforded, it is certain that High School educated men will be largely attracted to the Department. Again, in the 50,000 and odd villages of the Presidency, the offices of Headmen and Karnam (*i.e.* accountant), which are under the control of Government, are mostly in the hands of non-English-educated men, being permitted to be hereditary. If the hereditary character of these offices is abolished and if the offices are thrown open to High School educated men, not only will unemployment among the educated become non-existent, but there will be a great demand for them, and the efficiency of village administration will also be greatly improved. The Committee have not considered these avenues of employment.

Again, neither the Professor nor the Committee would seem to have perceived the present difficulties that stand in the way of educated youth taking to agricultural pursuits. In a Province

where agriculture is the mainstay of the people and the percentage of the population directly depending on it is nearly three-fourths, there is only one institution giving instruction in agriculture, and even that is limited to a few score of students, most of whom are trained for employment in the Government Agricultural Department. There is no scope given for agricultural training, and the blame for this is certainly on the Government—which since 1921 is in respect of this subject a *Swaraj* Government, being in the charge of a Minister of the people! It is easy to say that the educated men of the country should turn their attention to agriculture, but, unless they have received a proper training in the subject, they will not be wanted for agriculture where cultivation is carried on in customary fashion, except so far as modified by demonstration of the advantages of innovation and change. Unless educated men who want to take to agricultural pursuits can bring some new advantages they are bound to fail. The necessity of a wide system of agricultural institutions which will give instruction in modern agricultural methods has been emphasised by the recent Report of the Agricultural Commission, and unless the Government establishes such institutions in large numbers educated men cannot be expected to turn to agriculture.

A. RAMAIYA

Madura, S. India.

INTERNATIONAL GOLD MOVEMENTS

BEFORE the war the meaning of the gold standard was clearly defined, and the conditions in which it worked were regarded as practically settled. On the other hand, the criterion, scope and spirit of the post-war gold standard have not yet had the opportunity to become crystallised during the short period that has elapsed since the system came into operation. It will take the experience of a number of years before the set of rules that govern the system is once more clearly defined. Meanwhile the problems arising in connection with international gold movements deserve particular attention, as their solution will largely contribute to the evolution of the post-war conception of the gold standard. Often questions of a purely technical nature lead to the adoption or modification of fundamental principles, or at least to debates which tend to clear controversial points.

An example to illustrate this is the case of the Midland Bank's

gold imports from New York, which raised the question whether it is absolutely necessary to allow for loss of interest when calculating gold points. This question did not arise in the past, as gold arbitrage was in the hands of firms which financed the transactions either by means of borrowed funds, in which case they had to pay interest, or by means of their own funds on which they lost interest. The necessity of including interest among the expenses of gold shipments was obvious in either case. If, however, a commercial bank undertakes gold shipments, the position is not altogether clear. Commercial banks have to keep in any case a large idle cash reserve. The question is whether gold floating on the Atlantic may be regarded as part of their cash reserve on which they are not supposed to earn interest. If the answer is in the affirmative, commercial banks are justified in omitting loss of interest when calculating the cost of shipment.

The extent to which this question affected the gold import point of the dollar exchange at the time of the Midland Bank's shipments (May and June, 1928) is shown by the following calculation :

	Including Interest.	Excluding Interest.
100,000 fine oz. at \$20·67033	\$2,067,033	\$2,067,033
Freight 3*s*. per £100 .	3,100·50	3,100·50
Insurance 1*s*. per £100 .	1,033·50	1,033·50
Interest 5 per cent. for 8 days	2,046	—
Total . .	\$2,073,213	\$2,071,167
100,000 fine oz. at 84*s*. 10*d*.	£424,166 8*s*.	
Gold point .	£1 = \$4·8877	£1 = \$4·8829

The exchange rate at the time of the Midland Bank's shipments was around $4{\cdot}88\frac{5}{16}$. Whether the transaction resulted in a nominal profit or a comparatively substantial loss depended on the question whether gold on its way to London could be regarded as part of the Midland Bank's cash reserve. Apparently the question has been answered in the affirmative, as official quarters did not object to the shipments on the ground that they were undertaken at a loss. Of course there could not be any question of refusal to buy it, as the Bank of England is under legal obligation to buy gold at the official buying price, irrespective of its origin. If, however, a bank were to import gold at a loss the Bank would certainly not fail to intimate to the importer its disapproval of the unnatural transaction. No such unofficial objection was raised, which fact is of particular importance in the case quoted. Everybody knows that the Midland Bank did not undertake the shipment for the sake of the negligible profit it yielded. The real

object was to bring about an expansion of the basis of credit. The influx of gold placed the Bank of England before the alternatives of either sterilising the surplus by reducing its own earning assets, or reluctantly consenting to an expansion of credit which was contrary to its policy. The shipments were, therefore, anything but welcome from the point of view of the monetary authorities. As, in spite of this, no attempt was made to discourage them on the ground that they were undertaken at a loss, and therefore unnatural, it appears that the principle of disregarding loss of interest has received a tacit official sanction.

The significance of this lies in its general effect upon gold points. As I pointed out in my previous notes on the subject (published in the March 1927 and September 1927 issues of this JOURNAL), there is a marked tendency, since the return to a gold basis, towards the contraction of the margin between gold points. This tendency will become further accentuated if the practice of disregarding loss of interest becomes general. Until now there has not been any sign indicating any intention on the part of our commercial banks to take a regular interest in gold arbitrage. As since the war our joint stock banks have taken up several branches of activity which were outside their sphere before the war—such as acceptance business or coupon dealings, for instance—it is by no means impossible that they will also take up gold arbitrage, to increase the sphere of activity of their foreign exchange departments. Even if they do so, it is by no means certain that they will accept it as a general rule to disregard the loss of interest. American and German commercial banks have been engaged in gold arbitrage for some time past, but they always calculated the loss of interest among the costs of gold shipments, unless they had a special reason to make the shipment. Should what is now an exception become the rule, commercial banks would thereby obtain a monopoly of gold shipments, as other firms which have no big idle reserves can hardly afford to disregard the loss of interest.

Another principle which has emerged out of the experience of the last few years is that of the non-interference of Central Banks with each other's gold reserves. Up to now it has been adopted only with regard to direct purchases by Central Banks. As a result of Press criticisms provoked by the withdrawal of gold by the Bank of France from the Bank of England, in May and June 1927, a conference of Central Banks held in Washington in July 1927 has agreed that no Central Bank should purchase gold from another Central Bank without the latter's approval. Apparently the principle has been extended also to purchases of gold by Central

Banks in the open market in London, which are regulated by agreements with the Bank of England.

The question whether the principle applies also to indirect purchases by Central Banks is still left to be decided. It was raised in September last in connection with the heavy shipments of gold to Germany. The Reichsbank was anxious to emphasise its neutrality towards these movements. The fact, however, that it accentuated an unnatural appreciation of the reichsmark by means of selling part of its foreign exchange holding was held to prove that it encouraged the influx. The question whether this attitude was contrary to the spirit of the agreement of Central Banks was left undecided. In that particular case the Bank of England did not disapprove of the withdrawal of gold for Germany, being an alternative to a withdrawal from New York which was regarded as the bigger evil. Sooner or later, however, an agreement will be reached on the application of the principle of non-interference upon exchange transactions artificially stimulated by Central Banks. The decision is not so simple as in the case of direct purchases by Central Banks. It is difficult to define a limit between measures tending to defend the Central Banks' own reserves and those tending to attack the reserves of other Central Banks through the intermediary of the Foreign Exchange market. The difference is merely one of degree. It would be, nevertheless, possible to avoid by agreement indirect interference with the reserves of other Central Banks in cases where the encouragement given by a Central Bank is as obvious as in that of the recent German gold withdrawals. Here, again, it is mainly technical points which will eventually lead to the extension of one of the fundamental principles of the post-war gold standard.

PAUL EINZIG

RECENT OFFICIAL PUBLICATIONS

Tables and Diagrams relating to the Rubber Industry. (Cmd. 3086. 6*d.*)

THESE tables represent part of the data collected by the Committee of Civil Research which recently investigated the working of the scheme for regulating the exports of rubber from Malaya and Ceylon. They give the more important official trade statistics of the rubber industry during the past eight years, and the data thus collected will be helpful to those engaged in the

industry who are already acquainted with its history, methods and organisation; anyone not possessing this knowledge, if he would understand the problems of the industry, must seek further information.

The plantation rubber industry is a product of the twentieth century. In 1900 only a few thousand acres were planted and a few tons were produced. The world was then using about 40,000 tons of dry rubber, and obtained its supplies, as it had done for more than a century, from trees and shrubs growing naturally in the forests of South America and Central Africa. With a view to establishing a new industry within the Empire, the British Government caused seeds of the *Hevea Braziliensis* to be collected from the Amazon Valley. These seeds were germinated at Kew and the seedlings were sent to Ceylon in 1876. It is from these seedlings that the whole of the area planted with rubber in the East is derived, which area, at the end of 1926, extended to nearly 5,000,000 acres, and produced, in that year, nearly 600,000 tons of rubber.

The British were the pioneers of the industry, but they were soon followed by others. The geographical distribution of the planted area, according to nationality of ownership (Table III), shows that the British interest in the industry is still preponderant; 60 per cent. of the planted area being within the Empire, and a further 8 per cent. being British-owned in foreign countries, practically all of which is in the Netherlands East Indies. The industry, therefore, is a very important imperial asset. Table III also indicates clearly the impossibility of controlling supplies by voluntary action amongst producers themselves. Nearly 70 per cent. of the planted area is held in organised estates, largely owned by Joint Stock Companies, but of these only about 500 Companies, controlling about 30 per cent. of the planted area, are domiciled in the United Kingdom, whilst 30 per cent. of the planted area is owned by hundreds of thousands of small native holders.

The remarkable development of the plantation rubber industry has synchronised with, and has been stimulated by the rapid increase in motor transport. The world registration of automobiles increased from about 20,000 in 1900 to nearly 9,000,000 in 1919, and to 30,000,000 in 1927. Considering the rapidity with which this new demand has arisen, together with the fact that from five to six years must elapse between the clearing of the jungle and the harvesting of the first commercial crop of rubber, and a further period of six years is required before the trees give their maximum yield, it is hardly surprising that the industry has been

subject to considerable fluctuations, but it is somewhat remarkable that the growth of the automobile industry, for which rubber is essential, has never been retarded for lack of supplies of this commodity. There are, however, other important causes of fluctuation. To-day 80 per cent. of the total quantity of rubber absorbed annually by manufacturers goes into automobile tyres and tubes. Improvements in the quality of the tyres, or in the surfacing of roads, which increase the mileage given by every pound of rubber in tyres, will have a serious and prolonged effect on the real consumption of rubber. Moreover, in times of rapidly rising prices, consumers of tyres are likely to buy ahead of their requirements, thus accentuating the rise, and in periods of falling prices they tend to delay buying new tyres, thus accentuating the fall. When it is remembered that one spare tyre per automobile represents over 100,000 tons of crude rubber, the possibilities of wide temporary fluctuations are obvious. There is a further cause for price fluctuations. Between 75 and 80 per cent. of all rubber produced is of standard quality; this has resulted in a highly organised market which offers attractive possibilities for speculative transactions.

Having outlined the main factors affecting the industry, it is interesting to observe how these factors have influenced conditions of supply and demand since its inception. During the first ten years of the century the increasing demand for rubber for tyres and tubes placed a strain on the world's productive capacity, and the resulting high prices caused a rapid extension of planting, especially during the years 1905 to 1910. In the latter year the price was carried, largely by speculation, up to 12*s*. 10*d*. per lb., and many new plantation companies were floated. During the next three years very large extensions were carried out and planting of trees in small native holdings was commenced, first in Malaya and afterwards in the Netherlands East Indies. From 1914 to 1920 extensions of the planted area were carried out at a fairly uniform rate. The demand for rubber during those years was sufficient to maintain prices at a remunerative level, which gave the necessary encouragement to native planting and offered no obstacle to the completion of the planting programmes of estates drawn up in 1910 to 1912. (In 1918, owing to the necessity for concentrating as much tonnage as possible in the North Atlantic, absorption by United States manufacturers was curtailed, large stocks accumulated in the East, and prices there slumped badly.) The effect of the war on the consumption of rubber varied in different countries. In the United States the

resulting industrial activity and prosperity arising therefrom stimulated the motor industry; in the Allied countries the demand was also stimulated, but to a much less extent, and mainly for war purposes; in the Central Empires supplies were cut off at the commencement of hostilities and the manufacturing industry there was definitely retarded.

The rapid increase in absorption of rubber during 1919 (which was partly due to the under-absorption during the previous year) and the probability of still further increases during the succeeding years caused most of the large manufacturers, both in the United States and in the United Kingdom, to become apprehensive about their future supplies, and large forward commitments were entered into at the higher prices then ruling. The decline in the value of rubber which commenced in the spring of 1920 was partly due to the general trade depression, but it was mainly due to the increased life built into the improved tyres then being produced, and it was accentuated by the natural policy of tyre users in times of falling prices. The rate of increase in the consumption of rubber was thus retarded, and there appeared a large gap between potential production and actual consumption which seemed likely to endure for a number of years. Various schemes for the voluntary regulation of output were considered in 1920 and 1921, but the multiplicity and diversity of ownership already referred to offered an effective obstacle to their adoption.

By October 1921 all hope of voluntary action had been abandoned. Thousands of small native holders in Malaya were faced with ruin; the Malayan finances were in a serious condition, and there was the possibility of large areas of estate rubber being acquired by foreign interests at knock-out prices owing to the financial exhaustion of their existing owners. These factors induced the Government, which had hitherto refused to interfere, to appoint a committee under the Chairmanship of Sir James (afterwards Lord) Stevenson. This Committee, after careful deliberation, recommended Government regulation of exports as the only means of providing an immediate solution of the problem. But the manufacturers' forecasts of the world's requirements for 1922, which were considered by the Committee at the end of 1921, were so low that, even with the most optimistic view that they could reasonably take then, it seemed hopeless to adopt any scheme for Malaya and Ceylon unless the Netherlands East Indies co-operated. The Dutch were approached, but it was not until August 1922 that they finally refused to co-operate. By that time it had become clear that absorption was proceeding at a greater

rate than even the Committee anticipated, and as 90 per cent. of the British Companies operating in the Netherlands East Indies agreed to regulate their exports voluntarily in accordance with the proposed scheme, the Stevenson Committee revised their previous decision, and the Governments of Malaya and Ceylon brought the scheme into force on the 1st November 1922.

The original scheme pivoted on an average quarterly price of 1*s*. 3*d*. per lb. for Standard quality Ribbed Smoked Sheet, London Landed terms. If the price were over 1*s*. 3*d*. the quarterly exportable percentage of Standard Production (approximately normal unrestricted output) was increased by 5, if over 1*s*. 6*d*. by 10; if under 1*s*. 3*d*. it was decreased by 5, unless it already stood at 60, when no further decrease could take place unless the price averaged less than 1*s*. The exportable percentage during the first quarter of the scheme was fixed at 60, and the subsequent exportable percentages and average quarterly prices are given in Table XII. The pivot price of 1*s*. 3*d*. was fixed at the lowest figure which would preserve intact the world's productive capacity whilst giving the maximum encouragement to further consumption.

The introduction of the scheme was welcomed by the producers, but it aroused a great deal of antagonism amongst manufacturers and others, especially in the United States. This was all the more remarkable because the scheme, if properly made use of, was capable of ensuring a continuous supply of rubber at a comparatively low and stable price for a considerable period. The releases of rubber were largely in the hands of the buyers, and had they regulated their buying policy more in accordance with the scheme, the price of rubber would never have been much over 1*s*. 3*d*. During 1924, notwithstanding the steady reduction in world stocks, the price of rubber for one quarter averaged less than 1*s*., thus starting a further contraction in supplies. By the beginning of 1925 the exportable percentage stood at 50; stocks were low and the somewhat abnormal increase in absorption, owing to the adoption of the low-pressure tyre (which at that time required considerably more rubber than the corresponding high pressure tyre) during the spring of 1925, resulted in a rapid decline in stocks, an increase in speculative buying, and a continuous rise in price until it reached 4*s*. 6*d*. in July. After a decline in August, the price again rose, until it reached 4*s*. 8*d*. in December. Manufacturers naturally put the blame on the scheme, and those who had not made forward contracts in 1924 at the low prices then ruling clamoured for larger increases in the exportable percentage. But for nearly three years producers in the restriction

areas had been working on a 60 per cent. basis, and their labour forces had been reduced to a minimum, as few of them could afford to accumulate, on their estates, rubber which they could not export. As the exportable percentage rose during the last half of 1925, a labour shortage developed, and this was not fully made up until the summer of 1926. Any drastic modification of the scheme in the summer of 1925 would have caused a scramble for labour and disorganised production, without adding materially to the supplies of rubber.

Up to the latter part of 1925 it had appeared that consumption would not overtake potential production until somewhere between 1928 and 1930. The rapid adoption of the low-pressure tyre enhanced the estimates of future consumption and brought much nearer the probable date when a shortage might develop. Extensions to the planted area during the years 1921 to 1924 had been carried out on a comparatively small scale, owing to the low price of rubber. The world's potential output during the years 1926 to 1930, therefore, would show only a small rate of increase, and any excess production during 1926 and 1927 appeared to be insufficient to replenish the depleted world stocks (on the 30th November, 1925, the London stocks were only 4,000 tons; on the 30th November, 1922, they had been nearly 70,000 tons). Such was the view generally held at the end of 1925, when a long period of high-priced rubber seemed inevitable.

At the beginning of 1926 more supplies became available on a sensitive market and the price began to fall. Resistance by tyre users to the high price of tyres developed, and was helped by the over-buying in 1925, by a backward spring and by intense propaganda in the United States against the "British Rubber Monopoly." Severe cuts in tyre prices were made, which, however, had little immediate effect on consumer resistance. Absorption of crude rubber by manufacturers was reduced, stocks steadily increased, speculative selling spread. It then appeared that a contraction in supplies might again become necessary, but no substantial reduction in the exportable percentage could take place unless the quarterly price averaged under 1*s.* 3*d.* for a very considerable period. Manufacturers with the high-priced forward contracts which they had made in the second half of 1925 found themselves in a very serious position, even although the factors which had caused the fall in price might only be temporary in their action. A revision of the scheme thus appeared to be necessary. On the 1st March, 1926, the pivot price was raised from 1*s.* 3*d.* to 1*s.* 9*d.*, and provision was made for the percentage

to drop to 80 if that price were not maintained. The following extract from a statement made by Mr. Amery in the House of Commons on the 2nd July, 1926, sets out clearly the reason for the Government's action. ". . . For many months average prices were below this range (1*s*. 3*d*. to 1*s*. 6*d*.), and when ultimately, some twelve months ago, a very rapid rise in the spot price took place, with a consequent upward movement in the prices at which forward contracts were arranged, the conditions were such as to make it necessary to review the basis on which the scheme had been prepared in 1922. In those circumstances it was decided by His Majesty's Government that revision of what may be termed the pivotal price range was required to bring the restriction measures more into line with actual conditions in the industry. At the same time, the concessions which have from time to time been made in the direction of increasing the assessments of standard production of estates in Ceylon and Malaya have resulted in the increase of actual exports to such an extent as to require the provision of some more immediately effective degree of restriction than was contemplated in the existing scheme in the event of the average price of rubber falling below the pivotal range." On the 1st November, 1926, new regulations governing future releases and contractions were announced, with the object of giving greater elasticity to the scheme.

Meanwhile absorption had not shown the increase that was anticipated in 1925. Notwithstanding the great increase in the proportion of low-pressure tyres, the average quantity of crude rubber per tyre was the same in 1927 as it was in 1925, owing to improvements in construction, to the partial replacement of crude rubber by reclaimed rubber, and to the greater use of carbon black. It is not yet possible to measure the extent of the permanent increase in the tyre mileage per pound of rubber, as weather conditions from one year to another have a material influence on wear and tear. It is, however, clear that greater skill in manufacture of tyres has resulted in a substantial economy in the use of crude rubber in the last few years.

During the year 1926 there were practically no restrictions on exports; on the contrary, most estates obtained export rights for more rubber than they could produce, and as these rights had an unlimited validity, they materially retarded the effective working of the restriction scheme in 1927, especially as the exportable percentage was not allowed to fall below 60. The average exportable percentage during 1927 worked out at 64 per cent. of Standard, but owing to the utilisation of unused export rights, to

smuggling, and to over-assessment of Standard Production, the exports from the restriction area were well over 80 per cent. of its potential output. The revised scheme had, therefore, no chance of operating effectively during that year.

Towards the end of 1927 the Malayan assessments were reduced and steps were taken to suppress smuggling. Before these measures became effective, however, the British Government decided to abandon the scheme as at the 31st October next. The principal reason for withdrawing the scheme was that the British proportion of the industry was being sacrificed to non-British producers. It is true that the exports from the British Empire and from British estates in foreign countries fell from 75 per cent. of the total world exports in 1922 to 66·5 per cent. in 1926 (a year in which there was practically no restriction). In the absence of restriction in 1927 it would have remained at about this figure, provided that the price was still at a profitable level. But the scheme had nothing to do with this fall in the percentage. Every pound of rubber exported up to 1927 came from trees planted before the scheme came into existence, and the decline was entirely due to the fact that the non-British areas in 1922 contained a much larger proportion of immature rubber. In particular the large areas of Dutch native rubber were only coming into bearing in 1920 when the slump supervened. Naturally the exports of this rubber would show a large increase even after allowing for smuggling from Malaya. Moreover, the native taps much more drastically than the European, with the result that he obtains very high yields during the first few years of tapping, but when his trees are from 8 to 10 years old their output declines rapidly, owing to bark exhaustion and disease, and new planting on a considerable scale is necessary to maintain their output; the increase in the effective native areas, therefore, may not be so large as is frequently supposed. The real criterion is whether, under the scheme, non-British extensions were being carried out on such a scale as to diminish seriously the British proportion of the industry. Unfortunately it is not possible to give a definite answer to this question, because the effective native areas in the Netherlands East Indies are not known, but the figures published in Tables III, V and VIII indicate that the British proportion of the area under rubber at the end of 1926 was about the same as the British proportion of the exports during that year. It follows, therefore, that up to the end of 1926, notwithstanding the large extensions stimulated by the abnormally high prices during 1925 and 1926, the British proportion of the industry had not shown any significant varia-

tion. If, however, the Government had come to the conclusion that the 1*s.* 9*d.* pivot price, which would have become really effective during 1928, would have encouraged Dutch native planting at a greater rate than British planting, the obvious remedy would have been to lower the pivot price instead of withdrawing the scheme and throwing the industry into chaos.

The decision to abandon the scheme brought the price down to the bare average cost of production, and so long as it remains at that level capital will not be available for extensions, the upkeep of which involves a heavy liability during five or six years, and the natives, whose planting operations appear to be largely dependent on the current price of rubber, will likewise cease to plant.

It is impossible to forecast how long the industry will drift unprofitably, but one thing is certain: stability of price over a period of years which the scheme made possible, and which the co-operation of the large manufacturers made probable, is now further off than ever.

G. RAE

Report of the Industrial Transference Board. (Cmd. 3156. 83 pp. 1*s.* 6*d.*)

AFTER a lifetime largely spent in denouncing the fatuities of Government publications, it is extremely pleasant to find a Report of a Board with which cordial agreement is possible. The three knights, Sirs Warren Fisher, John Cadman, and David Shackleton, have faithfully set forth the disagreeable fact and shown how the old well-tried remedy can be applied with the least possible pain.

The disagreeable fact is that the number of persons accustomed to work in several staple industries in this country is largely—about 200,000, the Board estimates—in excess of the number which can be employed in those industries under the conditions which are likely to be present in the lifetime of the present generation; one of these conditions being that the price of their products cannot be much raised without knocking down the demand, and another being that labour in them will not be forthcoming if the remuneration offered is not such as to put those who perform it in a position which on the whole is approximately equivalent to that occupied by other branches of the same grade of the working class.

The old and well-tried remedy for such a state of things is transference of the surplus workers from the trades, and if necessary from the places, in which they have been working.

Here the Board are confronted with the popular belief that no trades or places have any room for additional workers, and they evidently find some difficulty in coping with it, as well they may, since no economist has yet dealt really well with the idea of demand for labour in general. They are obliged to content themselves with pointing out (1) that the existence of some unemployed is no proof that there is no unsatisfied demand for labour in the same area, (2) that 120,000 (gross) new engagements of workers are made every week, (3) that 850,000 (net) additional workers have been taken on in four years, and (4) that the number of young recruits is about to diminish owing to the great decrease in the number of persons born. The second of these arguments seems fundamentally weak, since the existence of a heavy turnover cannot prove the ease of increase; and the third and fourth arguments look like a gallant attempt to run with the hare and hunt with the hounds, since, while the third suggests, what is true enough, that an expanding population finds employment for itself, the fourth suggests that it is easier for a stationary population than for an increasing one to find employment for itself—a proposition which is certainly unproved and probably untrue.

Possibly the Board would have done better to say that to question the existence of vacancies for new workers because you cannot see them is rather like questioning the growth of trees because you cannot see the additions to height and width and girth before they are there. Thirty years ago there was no employment in the manufacture, repair, maintenance and housing of motor vehicles. Hundreds of thousands of vacancies for new men and boys in this employment have since then come into being and been filled up without their existence being in any way forced on our attention. Asked at any moment during the intervening period how many vacancies they had, the works and garages already at work would almost all have replied "None," and those not yet started could not have been asked. Yet the expansion went on; and if in a case of such extraordinarily rapid expansion vacancies for additional workers are scarcely visible, how are we likely to see them where the rate of expansion is very much lower, though it may be still far above that of the growth of population?

Properly convinced, even if by somewhat inefficacious argument, of the fallacy of the popular "lump of labour" belief, and holding rightly that while the demand for any particular kind of labour is always strictly limited, the demand for labour in general, properly distributed, is unlimited except by the supply, the Board

address themselves with confidence to the difficulties of the particular transference required in the case before them.

The most obvious of these is the fact that if much suffering is to be avoided, a very large transference must be effected quickly. Figures put forward by the Board somewhat diminish the discouraging effect of contemplating the transference of 200,000 persons. In the twelvemonth preceding August 1, 1927, 30,000 men over eighteen left the coal industry to go to other industries; 17,500 of these, it is true, were replaced by the entry of men over eighteen from other industries, but from the date mentioned the entry of such men has been stopped altogether by an agreement made between the Mining Association and the Ministry of Labour. And further, in the same twelvemonth natural wastage by death and retirement was 56,000, while the young recruits only numbered 40,000.

It certainly looks, therefore, as if no impossible increase of movement out of the trade and no incredible decrease of boys entering it are required in order to make the required reduction of personnel in about three years. But it must be remembered that in every occupation there is a fringe which is exceedingly mobile, and that mobility diminishes as you cut further and further into the mass. Accordingly, there is danger of the transference of the second quarter being more difficult than that of the first, and so on till at last a very immovable rump is reached. Moreover, in regard to mining there is the further consideration that not only must the personnel of the whole occupation be reduced some 20 per cent., but the personnel in some particular areas must be reduced 100 per cent. Where a trade is widely spread, a great reduction in the total number of persons employed in it can often be effected without many of them moving their residence from one place to another. But when a mine or a group of mines, not situated in a district thickly peopled because of the presence of other industries, is shut down, the whole of those employed, the least mobile as well as the most mobile, must change their residence, even if some escape, by transfer to other mining areas, the necessity of changing their occupation as well.

Resistance to movement may be intensified by injudicious measures which, as the Board put it, "tend to anchor men to their home district." Relief works in the depressed areas "are a negation of the policy which ought to be pursued"; if there are to be relief works at all, they should be elsewhere, so as to draw the unemployed from the depressed areas into others where there is some chance of permanent employment.

"Similarly, the interests of the unemployed surplus in" the depressed "areas require that the administration of poor relief and of unemployment benefit should not become an artificial barrier to the movement of labour. In areas where regular work in the future for a large proportion of the unemployed is an impossiblity, it is essential that the economic stimulus towards transfer to another area to earn a livelihood should not be artificially weakened."

Pressure of this kind can be assisted in its action by direct aid to transfer to new employments and new places of residence. The training centres help the first of these movements, and pecuniary advances made by the labour exchanges the second.

But the Board's greatest hope seems to be in its more novel proposal, for a vigorous propaganda or "publicity stunt" as the irreverent might call it, among employers of all places and classes in the country. The Government and everybody else is to join in impressing on employers that displaced miners are strong and intelligent men, capable of doing almost anything well, and only addicted to bolshevism when badly treated or left to starve at derelict pitheads—and that they can be got on application at the nearest Labour Exchange. Advertisement often has its comic aspect, but it has its uses, and never was put to a better one than this. At the moment of the writing of the present notice, the Board's plan seems to be meeting with very considerable success.

Towards the end of their Report the Board show signs of irritation with the policy of the overseas British dominions, which seems, while professing eagerness to receive more British immigrants, to discourage them by multiplicity of requirements. Why, for example, should an intending emigrant to Australia or Canada be asked his religious denomination, and in case of Canada be further assured that "Protestant" is not sufficient; "actual denomination must be given, *i.e.* Church of England, Roman Catholic, Wesleyan, etc." But the Boards' criticism scarcely goes to the root of the matter, which is to be looked for in the curious belief that the market for agricultural labour and production is unlimited and that for other labour and production strictly limited. With population slackening and agricultural art greatly improving, more agriculturists are not really wanted in the world at large or the British dominions in particular. And no dominion can encourage the immigration of agriculturists by protecting (the dominions do not yet, I think, translate the word into "safeguarding") its manufacturers, and thus making its

agriculturists pay more than they need for the things they want.

EDWIN CANNAN

Report of the Royal Commission on Agriculture in India, 1928.

THE Report of the Royal Commission on Agriculture in India may be said to be one of the most complete official documents that have been issued in recent years. The Report covers nearly 600 pages and makes 616 recommendations. In addition there are fifteen Blue-books of evidence and, for a wider public, an abridged report of ninety pages. Royal Commissions have rendered great services to rural India, such as the Famine Commissions of 1880, 1898 and 1901, and the Irrigation Commission of 1903. The Royal Commission under the chairmanship of the Marquis of Linlithgow is no exception. Its Report is a document which no student of rural economics can afford to neglect.

The terms of reference were, " To examine and report on the present conditions of agriculture and rural economy in British India, and to make recommendations for the improvement of agriculture and the promotion of the welfare and prosperity of the rural population; in particular to investigate: (*a*) the measures now being taken for the promotion of agricultural and veterinary research, experiment, demonstration and education; for the compilation of agricultural statistics; for the introduction of new and better crops, and for improvement in agricultural practice, dairy farming and the breeding of stock; (*b*) the existing methods of transport and marketing of agricultural produce and stock; (*c*) the methods by which agricultural operations are financed and credit afforded to agriculturists; (*d*) the main factors affecting the rural prosperity and welfare of the agricultural population; and to make recommendations." It was not within the scope of the Commission's duties to inquire into the existing systems of landownership and tenancy or the assessment of land revenue and irrigation charges or the existing division of funds between the Government of India and local governments.

It is impossible here to deal, except in barest outline, with the recommendations of the Commission. The problem is not a simple one. It affects a population of more than 250,000,000, and nine-tenths of the total population live in villages, the remaining tenth in towns. The number of persons in the last (1921) Census who were literate, *i.e.* in the sense of being able to write a letter in any language and read the reply, was 22·6 millions only,

or, excluding children under five, 8·2 per cent. of the population. The percentage of literacy among the total population of twenty years and over is but 17·1 for males and 2 for females. For this reason alone it is not surprising that the average standard of production and the general level of rural welfare are lower than the standards prevailing in most, if not all, other countries. There are, however, other factors. Indian veneration for the cow has had very startling economic results. The annual economic loss caused by 25,000,000 superfluous cattle is £117,000,000, or more than four times the land revenue. "Call it prejudice, call it passion," said a Hindu to Miss Mayo in *Mother India*, "call it the height of religion; but this is an undoubted fact, that in the Hindu mind nothing is so deep-rooted as the sanctity of the cow." There is also among Hindus a great reluctance for religious reasons to kill any animal, and thus the animal world is not kept in its place and it competes with man for the produce of the soil. An expert before the Commission estimated the average loss of grain, fodder and fruit crops from the depredations of animals, mainly pigs, monkeys, peacocks and porcupines, to be from 10 to 20 per cent. of the total yield. It must be left to Hindu theologians to discover a solution of the conflict between economics and transmigration. Economics and religion are closely interwoven in India to-day, and form a great contrast to the picture described by Mr. Keynes in his *Short View of Russia* when he speaks of modern capitalism in the West being "absolutely irreligious, without internal union, without much public spirit, often, though not always, a mere congeries of possessors and pursuers." Mr. Keynes adds, "One begins to wonder whether the material advantages of keeping business and religion in different compartments are sufficient to balance the moral disadvantages."

The Commission points out that there are other factors more easily removable, viz. wastage from disease, such as malaria, plague, cholera and hookworm, and from diet deficiency. There is the recklessness of the village borrower, who accepts indebtedness as a settled fact. There is the process of subdivision and fragmentation of holdings, which reaches such a pitch that many tillers of the soil can hardly exist on uneconomic holdings. Subdivision is mainly due to the laws of inheritance amongst Hindus and Mahomedans, and fragmentation to the method by which these laws are carried out. The Commission does not accept the view that the soils are undergoing a progressive decline in fertility. A balance has been established, and no further deterioration is likely to take place under existing conditions of cultivation.

Farmyard manure is to a large extent lost to agriculture by being made into cow-dung cakes for domestic fuel.

The great aim, according to the Commissioners, is a sound and well-organised co-operative movement based upon "the careful education and scientific training of the villagers themselves." The key is the introduction of compulsory primary education, to be measured, of course, in decades. It is education that will no longer make the life of man "poor, nasty, brutish and short." The cultivator must be taught to help himself if he is to escape from the embarrassments due to ignorance, thriftlessness, and the lack of the will to live better. In the words of the Commission, "no substantial improvement in agriculture can be effected unless the cultivator has the will to achieve a better standard of living and the capacity, in terms of mental equipment and physical health, to take advantage of the opportunities which science, wise laws and good administration may place at his disposal."

The agricultural question is in some senses a financial one. Under the Reforms agriculture is a matter for the provinces, and the Central Government retains only central agencies and institutions for research. Provincial governments are spending on agriculture less than one per cent. of their revenue, although that industry engages three-fourths of the population. Constitutional changes have retarded rather than advanced the application of science to industry, and the Commission has recommended the creation of a Council of Agricultural Research of thirty-nine members, three of whom would be whole-time members, to promote and co-ordinate research. This Council should be entrusted with the administration of a non-lapsing fund of £375,000, to which additions from time to time should be made as financial conditions permit. In the provinces provincial research Committees should also be established. "If the inertia of centuries is to be overcome, it is essential that all the resources at the disposal of the State should be brought to bear on the problem of rural uplift." It is impossible to deal in this note on the detailed recommendations on agricultural practice, on communications and marketing, on the great importance given to full and accurate statistics under an expert department. The Commission is satisfied that, given the opportunity, the cultivator will be willing and able to apply progressively the service of science and organisation to agricultural production.

G. FINDLAY SHIRRAS

Committee on Industry and Trade. Survey of Metal Industries, with a Chapter on the Coal Industry. (Stationery Office, 1928. 5*s.*)

THIS volume, issued by the Balfour Committee, is a handbook of reference on particular matters of technical process and general organisation, similar to the volume on the Textile Industries which was reviewed in our last issue. Many of its larger conclusions were anticipated in the volume on "Factors in Industrial and Commercial Efficiency," published last year. What is of main interest to economic students in a study like this is the test or verification, in some cases the amplification, of theoretical expositions. For example: a relation is shown between representative conditions of production and the rate of change in technical process. A new technical process connot be launched at once by new producers on the most efficient scale of exploitation, so that even with good management what is representative is largely a question of what may be called the phase of organisation in relation to time and invention. When processes are liable to fairly rapid change, the capacity which is immediately most economical may not be the best capacity to instal. The phase may also be a question of localisation, at a time when technical processes, working largely through the factor of freights, are slowly leading to shifts, accompanied perhaps by integrations. A distribution of costs relative to such aspects of the phase of production is relevant to the particular expenses line. Again, a great "external economy" for an industry may begin as the internal economy of certain producers, reacting on the whole use of materials, even if the new process remains for some time a monopoly; as in the release of the pressure on ore supplies after the discovery of the basic process. Further, a large volume of production may be so articulated with special processes that it becomes necessary to observe how far changes in the marginal cost do not cover intra-marginal products, which are often sold on special conditions. This explains, to a considerable extent, in iron and steel and in coke the persistence of units of relatively small capacity. Some further verification is given to the causes making for and against the integrations which are a special feature of iron and steel. Apart from technical reasons, which would not apply to other industries, the security of supplies is given *simpliciter* as a reason for this tendency; it is a fact of administration. There is a notable verification (p. 29) of Marshall's analysis as regards the economic limits of scale of production. The volume enables the student to perceive the working of

two sets of forces which depend on two kinds of units; the forces of specialisation realised in what may be called the unit of *process*, and particularly observable in this group of industries; and the forces of integration, depending on the unit of *enterprise*; the interactions of these two being the condition of the organic evolution which Marshall and others have been so prone to stress.

D. H. M.

Guide to Current Official Statistics. Sixth Volume. (Stationery Office. Pp. 288. 1*s*.)

THE central feature of this Guide is a detailed subject index constructed on novel lines to enable the inquirer to discover in a few minutes not only which publications contain statistics bearing on his subject, but also their precise scope and the dates and localities to which they relate.

CURRENT TOPICS

THE following have been elected to membership of the Royal Economic Society:—

Advani, A. A.
Ahmed, R.
Alberti, His Excellency Mario.
Allen, E.
Armour, A. McB.
Auchinachie, P.
Bakhle, D.
Banerjea, A. N.
Barr, G. M.
Belasco, P. S.
Birck, Prof. L. V.
Bond, G. D.
Bottomley, C.
Bowcott, H. M.
Brady, F.
Brisman, Prof. S.
Calvert, Dr. W. J.
Carpenter, A.
Cartledge, F.
Chandekar, S. P.
Chaudhri, G. R.
Climpson, W. E.
Cobb, Miss K. B.
Coleman, S. J.
Cotonou, B. O.
Coultas, H. T.
Crum, Prof. W. L.
Dandeker, S. B.
Dayal, Prof. G.
Dear, W. J.
Desai, V. R.
Dev, B.
Doherty, W.
Downie, R. A.
Drake, F. G. F.
Edwards, D. S.
Ellison, G.
Evans, A. A. A.
Farmery, A.
Farquhar, R.
Gardiner, F. C.
George, R. F.
Gibson, T. G.
Glendenning, R. C.
Gray, J.
Haseda, Prof. T.
Haworth, Miss D.
Hayek, Dr. F. A.
Hayes, Rev. H. B.
Hopkins, W. S.
Hopper, T. R.
Howell, I.
Hulbert, G. W.
Inman, C. M.
Irving, C. D.
Isles, K. S.
Jeffery, N. M.
Jivanandham, Prof. E. R.

Jones, J. M.
Jordan, D.
Kahn, R. F.
King, L. T. S.
Koranda, F.
Kutzleb, W.
Laws, J. B.
Leplastrier, J. S.
Lewis, R. B.
Loesch, R. A. O.
Lomax, N.
McKenzie, A.
Magotra, S. C.
Mair, L. A.
Manning, A. E.
Mansfield, F. C.
May, J. R.
Mayne, A. C.
Mehrotra, G. N.
Moore, W. D.
Morrall, E. L.
Mulvany, Miss E.
Muse, A. W.
Newton, J.
Newton, W.
Nguyen, Van N.
Norman, J. S.
North, C. P. F.
Odell, H. J.
Osundiya, B. B. A.
Owen, W. B.
Padgett, W. T.
Parkinson, C. F., Junr.
Partington, A. E.
Peacock, A. L.
Pillai, G. R.
Porri, Prof. V.
Potter, S. C.
Raws, Sir W. L.
Reed, J. E.
Reid, G. L.
Rennix, H. S.
Rice, M. G. T.
Richards, W. L.
Richmond, N. M.
Riffkin, Prof. J.
Robertson, T. R.
Robinson, J. R.
Ross, D. H.
Rosser, D. S.
Sadler, W.
Saini, D. R.
Sanders, H. C. W.
Shearer, J. O.
Singhal, G. N.
Sloan, P. A.
Smith, F.
Sommarin, Prof. E.
Soul, D. B.
Stokes, Prof. G. J.
Sutch, W. B.
Syret, H.
Tallack, F. H., M.B.E.
Teh, S. K.
Temple, R.
Tenzer, F. C.
Thadhani, J. T.
Thistlethwaite, B.
Thomas, G. G.
Thompson, Miss U. V.
Thomson, G. H.
Thornley, S. C.
Villasenor, Prof. E.
Webb, A. H.
Wells, A. H.
Whellock, K. A.
White, B. P.
White, C. J.
White, R. S. J.
Whitter, J.
Wild, T.
Williams, Miss J. B.
Winch, G. A.

The following have compounded for life membership of the Society:—

Banerjea, A. N.
Coleman, S. J.
Estrada, V. E.
Farquhar, R.
Ficek, C. F.
Hicks, J. R.
Hopkins, W. S.
Jones, J. M.
Jones, S. I.
Magotra, S. C.
Manning, A. E.
Page, J. K.
Porri, Professor V.
Ray, R.
Soul, D. B.
Tallack, F. H., M.B.E.
Thadhani, J. T.
Tolkowsky, L.
Whittaker, E.

The following ha been admitted to library membership :—

Bibliothèque de . Commission Centrale de Statistique, Brussels.

Bureau of Foreign and Domestic Commerce, Washington.

Carnegie Library, Howard University, Washington.

University of the Philippines.

University of Western Australia, Perth.

We record with regret the deaths of the following members of the Society :—

Braithwaite, Mrs. D.	(elected 1926)
Droppers, Prof. G.	(„ 1894)
Harvey, Sir E.	(„ 1924)
Hayakawa, A.	(„ 1896)
Hoffmann, G.	(„ 1890)
Parker, Dr. E. H.	(„ 1924)
Tuckwhan, T.	(„ 1927)

Dr. J. H. Clapham, F.B.A., Fellow and lately Tutor of King's College, Cambridge, has been elected into the newly established Professorship of Economic History in the University of Cambridge.

The International Union for the Scientific Investigation of Population Problems, referred to in the last issue of the ECONOMIC JOURNAL, has now been definitely founded. The British National Committee consists, at present, of Sir Bernard Mallet (Chairman), Professor Bowley, Dr. R. A. Fisher, Captain Pitt-Rivers, and Mr. Eldon Moore (Hon. Secretary). Applications for membership (subscription £1) should be addressed to Mr. Eldon Moore, c/o the Eugenics Society (who are giving office accommodation) 20, Grosvenor Gardens, London, S.W. 1.

OUR Japanese Correspondent writes :—

"The incessant fluctuation of the yen exchange and the consequent uncertainty felt by both domestic and foreign traders, seem to have awakened the nation to the necessity of the removal of the ban on gold exportation. Although the mind of the Government is not yet made up, the cry for immediate abrogation of prohibition is now becoming louder.

"In order to increase the number of labour members in the Diet, and to gain influence in practical politics, the movement for the amalgamation of various labour associations is gaining ground, although difficulties are being found in bringing the left and right wings into line.

"Rice being the deciding factor in Japanese economy, the prospect of a good harvest is telling favourably in every way.

"*Currency Administration*, by Mr. Fukai, the vice-president of the Bank of Japan, is regarded as one of the most valuable publications of the day. It is divided into fifteen chapters, including principles and administration of currency, interest, credit and note issues, specie kept abroad, foreign exchange and other related subjects. Being carefully written by a well-known financier, whose long services in our Central Bank and whose practical ability as a banker are widely admitted, the book is in favour not only among men of science but also among those in practical business. Success is thus assured, especially when we consider its low price (3½ yen) in spite of its being a big volume of 557 pages."

Members are asked to note that the title of Special Memorandum **No. 10**, "Report on Current Economic Conditions, October, 1928," was inadvertently **misprinted** on the cover as Memorandum **No. 11**.

RECENT PERIODICALS AND NEW BOOKS

Journal of the Royal Statistical Society

Vol. XCI. Part III. *Trade and the Gold Standard.* H. W. MACROSTY. An investigation of the finance of the period since 1922, including a positive analysis of the relation of the Bank to the Money Market. *Vital Registration in Europe.* P. G. EDGE. An account of the development of official statistics in various countries, with comments on differences in Continental practice. *Wholesale Prices of Commodities in* 1927. The Editor of the *Statist.*

Vol. XCI. Part IV. *Cost of Living of a Sample of Middle-class Families.* D. C. JONES. *Some Further Inquiries by Sample.* J. HILTON. A discussion of the statistical problems and lessons of four recent inquiries by sample into the circumstances of unemployed persons.

Sociological Review.

JULY, 1928. *The Mobility of Labour in Liverpool Industry.* C. J. ROBERTSON.

OCTOBER, 1928. *A Comparative Study of Unemployed and Employed Boys.* D. E. R. HUGHES.

Quarterly Journal of Economics (Harvard).

AUGUST, 1928. *The Rate of Interest, the Bank Rate, and the Stabilisation of Prices.* G. CASSEL. It is argued that interest is a price, and has an "equilibrium rate." It should be the aim of bank policy to keep prices stable, and this implies lending at the equilibrium rate. Departure from this rate is shown by changes in prices, and by nothing else. These considerations are applied to the administration of the gold standard, and to the problem of fluctuations. In the latter case, if bank rate is rationally administered, "our future is not determined by mathematical curves, but by our own intelligence and will." *Cost and its Relation to Value.* A. E. MUNROE. A new examination and classification of costs, with some criticisms of Marshall's demand and cost schedules. *Cyclical Fluctuations in Agriculture and Industry in Russia.* 1869–1926. S. A. PERVUSHIN. *Borrowed Reserves and Bank Expansion.* J. S. LAWRENCE. On what basis can a particular bank expand its loans with an addition to its reserves? Under exceptionally favourable conditions the maximum expansion, according to the existing ratio of reserves, is possible for particular banks as well as for the system as a whole. But "there may be times when expansion in excess of an increase in reserves is impossible," though there are extreme cases. Normal ratios of expansion are developed, and it is concluded that such ratios "give scant comfort to those who contend that credit may be controlled by a manipulation of the discount rate." *The Place of Mill and of Owen in the History of English Neo-Malthusianism.* N. E. HIMES. *The Colwyn Committee and the Incidence of Income Tax.* An examination of the argument and of Mr. D. H. Robertson's criticisms.

Review of Economic Statistics (Harvard).

AUGUST, 1928. *The Course of Stock Prices* 1825–66. A. H. COLE and E. FRICKEY. Based primarily upon railroad stocks which, apart from public lands, were the special channel of speculation. Other securities "show movements restrained or quixotic when compared with the more striking course of railway shares." The typical movement of railroad indices consists mainly of "long swings extending over a decade or more," though there are important geographical variations. *Regional Business Conditions: a Study of Bank Debits.* A. M. MATTHEWS and A. R. ECKLER. There is close economic relationship between the different Federal Reserve districts, as shown by fluctuations; the figures for agricultural districts show a substantial improvement in recent years; the recurrent fluctuations are less marked in bank debits than in basic production. *Review of the Second Quarter of the Year.*

Annals of the American Academy of Political and Social Science.

SEPTEMBER, 1928. *Stabilisation of Commodity Prices.* This series of popular articles is contributed by economists, industrialists, accountants and bankers. The scope may be indicated by the sub-titles on *Stabilisation by Co-operative Action* (especially statistical co-operation), *The Individual Firm and Stabilisation*, *General Factors affecting Stabilisation*; and there is a valuable Supplement on the special question of *Public Construction and Cyclical Unemployment*, in which the problem is quantitatively handled by an estimate of relative amounts of public and private construction. The conclusions of this Supplement deserve attention.

American Economic Review.

SEPTEMBER, 1928. *McNary–Haugen Movement.* J. D. BLACK. An account of the history and prospects of the proposed measure of relief to agriculture, with some analyses of the operation of the equalisation fee. *Revenue Act of* 1928. R. G. BLAKEY. *Inductive Evidence on Marginal Productivity.* J. M. CLARK. A discussion of the important statistical paper of C. W. COBB and P. H. DOUGLAS, whose *Theory of Production* is amended and elaborated. *Plight of Lancashire Cotton Industry.* B. DIETRICH. *Measuring the Accuracy of Prediction.* R. H. ROWNTREE. A discussion of the "more common measures of accuracy, together with some comments on their limitations and interpretation." *Criticism of "Economics of Business Fluctuation" in the United States,* 1919–25. R. J. WATKINS.

Political Science Quarterly.

SEPTEMBER, 1928. *Land Income.* R. T. ELY. A criticism of the view that income from land is analytically different from other forms of income.

Journal of Political Economy (Chicago).

AUGUST, 1928. *Nationalism and Economic Theory.* J. E. MOFFAT. *Economic Effects of Black Death.* H. ROBBINS. *Sixty Years of Branch Banking in Virginia.* G. T. STARNES. *Economic Sectionalism in Canada.* W. A. ROBINSON. *Correlation between Prices and Yields of Previous Years.* V. P. TIMOSHENKO.

Wheat Studies of the Food Research Institute (Stanford University, California).

AUGUST, 1928. *Ex-European Trade in Wheat and Flour.* Asiatic imports of wheat are becoming increasingly important and are likely to increase still further. Within a decade or so the ex-European trade may amount to as much as a fourth of the international trade, as contrasted with an eighth before the war.

SEPTEMBER, *Survey of the Wheat Situation, April to July,* 1928. All the important wheat producers in the Northern Hemisphere except India now appear to have harvested crops of average size or better. Exclusive of Russia, China and Asia Minor the Northern Hemisphere crop is apparently the largest since the war. The data suggest that a world wheat price level the lowest since 1917-24 seems likely to prevail in the coming months.

Journal des Économistes.

OCTOBER, 1928. *La loi des assurances sociales et ses diverses répercussions.* R. HUBERT. *La réhabilitation de l'or.* P. CAUBOUE. *L'Europe et le Protectionismus.* L. CHATIN-OLLIER.

Revue de l'Institut de Sociologie (Brussels).

APRIL-JUNE, 1928. *Le système monétaire anglais.* B. S. CHLEPNER. A fully documented historical account.

Revue d'Économie Politique.

MAY-JUNE, 1928. *La France Économique; annuaire pour* 1927. Annual review of population, finance, production, labour, etc., by various writers.

JULY-AUGUST, 1928. *Le Conseil national économique.* C. GIDE. A critical account of the proposed Economic Council, which would replace the *Conseil du Travail. Un théorie de l'inflation de crédit comme substitut à la théorie quantitative de la monnaie.* V. MILDSCHUH. Argues that a special cause of high prices exists when public loans are used to pay interest on existing debts. *La loi des rendements non proportionnels.* P. FROMONT. An historical account, showing the extension of the scope of the law of marginal returns. *Le syndicalisme fasciste.* F. PERROUX.

Vierteljahrshefte zur Konjunkturforschung (Berlin).

Sonderheft 9. *Der Trend.* P. LORENZ. A mathematical study of methods of determining and eliminating Trend.

Zeitschrift für die gesamte Staatswissenschaft (Tübingen).

85 Band, 1 Heft. *Integrationslehre und Staatsrecht.* E. TATARIN-TARNHEYDEN. Deals with the political theory of Rudolph Smend. *Anmerkungen zu Werner Sombarts "Hochkapitalismus."* A. SALZ. *Qualitative und quantitative Konjunkturforschung.* O. MORGENSTERN. A review of Mitchell, Pigou, and Snyder. *Soziale und politische Wissenschaften in Amerika.* R. MICHELS. *Kartelle und Staat.* G. LUCAS. A review of Lehnich's recent book, by the President of the *Reichswirtschaftsgericht.*

85 Band, 2 Heft. *Blüte und Niedergang der Florentiner Tuchindustrie.* R. DAVIDSON. Shows the capitalist character of Florentine industry in the early Middle Ages. *Anmerkungen zu Werner Sombarts "Hochkapitalismus."* A. SALZ. *Rasse und Recht.* H. LIERMANN.

Jahrbücher für Nationalökonomie und Statistik (Jena).

JULY, 1928. *Zum Verhältnis der neueren Wirtschaftstheorie zur Psychologie.* J. BACK. *Das Agrarproblem in Argentinien.* J. JESSEN.

AUGUST, 1928. *Das Agrarproblem in Argentinien,* II. J. JESSEN. *Die intermediären Finanzgewalten und ihr Einfluss auf Deutschlands finanzielle Belastung.* F. K. MANN.

SEPTEMBER, 1928. *Teleologische und technologische Wirtschaftsauffassung.* W. WEDDIGEN. *Bestimmungen des Wirtschaftlichen Gleichgewichts der Güterumwandlungen.* A. PIETRI-TONELLI.

Archiv für Sozialwissenschaft und Sozialpolitik (Tübingen).

AUGUST, 1928. *Die Preisdynamik der industriellen und landwirtschaftlichen Waren. (Zum Problem der relativen Dynamik und Konjunktur.)* N. D. KONDRATIEFF. This is an important article dealing with the relative price movements of industrial and agricultural goods in England and U.S.A. from the end of the eighteenth century. The major problem is to discover why there is a permanent tendency to falling prices for industrial goods in both countries, and for agricultural goods in England, but no such comparable fall in the prices of American agricultural products. This is discussed in relation to general price movements, and to special conjuncture periods. The main cause is seen to be the movements in real costs of production, due outstandingly to technical progress and increased productivity of labour. The minor problem is to show a close correspondence between long waves of price movements and the secular trend. Coincidently, acute and subtle arguments are used to discredit the ordinarily assumed effects on prices of such causes as movements of gold: the arguments, although interesting, are provocative. *Wohlstandsindex und sozialer Wohlstand.* M. ELSAS. *Die Angestelltenbewegung nach der Währungsstabilisierung.* DR. CRONER writes an informative article describing the progress, present position and future prospects of labour movements in Germany, and refers particularly to the effects of stabilisation. Thus, while the movements are partly the outcome of concentration and rationalisation, currency depreciation, unemployment and the resulting accentuation of class rivalry have had strong stimulative effects. The constitution and policies of the large unions are discussed, as well as the relations between them. Interesting information is given respecting the length of the working day, holidays and the progress of insurance. The article may usefully be read in conjunction with Mr. Guillebaud's recent work on the German Works Council. *Die Stellung der deutschen Sozialdemokratie zu den Fragen der auswärtigen Politik.* M. VICTOR. *Internationale Übereinkommen betr. die Sozialversicherung.* H. FEHLINGER.

Schmollers Jahrbuch (Munich and Leipzig).

FEBRUARY, 1928. *Prolegomena zu einer Theorie des Geldmarktes.* K. SINGER. This article is inspired by the consideration of a recent work by Hahn, a banker, who objects to the economist's definition of money and capital markets. Instead Hahn prefers to distinguish between the " kind " of money dealt with on the Stock Exchange, as compared with the remainder of the capital market. Dr. Singer objects to the new classification and attempts to show that it is unmerited. *" Theoretische " und " historiche " Volkswirtschaftslehre vom heutigen Stand der Forschung.* H. WAGENFÜHR. *Zur logischen Grundlegung der pratischen Wirtschaftswissenschaft.* W. WEDDIGEN. Aims at classifying the relevant scope, aims and subject-matter of the various divisions of economic science. An attempt is made to show the interrelation between these divisions, viz. Theoretical, Applied, National and Financial economics. *Roger W. Babson's Beobachtungsverfahren der wirtschaftlichen Wechsellagen.* G. CLAUSING. *Die heutige Lage der Britischen Eisenbahnen.* F. HEYER.

JUNE, 1928. *Vom Herrenstaat zum Wohlfahrtsstaat.* F. KERN. Makes a survey of the various kinds of State from the fifth century onwards, and the principal attributes and features of each. The article concludes with a critical appraisal of the modern democratic State. *Geistige und ökonomische Grundlagen des Bolschewismus.* H. JÜRGEN SERAPHIM. *Zur Reform des Bildungswesens der Juristen und Volkswirte.* F. BRUCK. *Landwirtschaft und Agrarkrise in Frankreich.* A. BERGSTRÄSZER. A very detailed summary of post-war conditions in French agriculture, including an interesting estimate of world factors and their influence on France's position. There is a good critical account of the present crisis, as well as a comparison between present-day agriculture and industry. *Ein Ausschuz für Begriff- und Namenforschung auf dem Gebiete der Soziologie.* H. L. STOLTENBERG. *Nuere Industrieliteratur.* H. VON BECKERATH.

AUGUST, 1928. *Die eheliche Fruchtbarkeit in Deutschland.* DR. TÖNNIES contributes a statistical survey of marriage fertility in Germany, with special reference to 1901, 1913 and recent years. He seeks an explanation of the paradox of an increased number of marriages and fewer children. This is found in the changes of the ages of married persons. *Zur Methode der exacten und historischen Nationalökonomie.* L. SOMMER. *Die wirtschaftspolitischen Strömungen der Gegenwart.* C. LORENZ. *Staatsreferendar und Staatsassessor.* J. SCHUMPETER. *Europäische Zollunion.* DR. WEHRLE reviews a symposium by twenty-two writers, none of whom are well known. He finds a few of the contributions to be of real interest, notwithstanding the expression of directly conflicting views.

Weltwirtschaftliches Archiv (Jena).

OCTOBER, 1928. *Die Wandlungen der Kapitalismus.* W. SOMBART. *Internationale Industriekartelle.* P. BERKENKOPF. A positive and descriptive study, leading to few general conclusions. *Die ökonomische Natur der bäuerlichen Wirtschaft.* G. A. STUDENSKY.

Giornale Degli Economisti (Rome).

JULY, 1928. *Prime linee di politica agraria negli scrittori Veneti d'agricoltura del secolo* XVIII. F. LUZZATTO. *Considerazioni sui "barometri" economici.* C. BRESCIANI-TURRONI. The last of a series of three important articles on the value of economic barometers. It is contended, partly on theoretical grounds and partly as a result of a careful analysis and survey of economic conditions in Germany in recent years, that "The multiple factors of economic fluctuations cannot be summarised in the two or three curves of a 'barometer.'" Account must be taken of the fact that any change in, *e.g.*, the short loan rate or the prices of industrial securities may have quite different causes and different significance in one year or in one phase of a trade cycle when compared with an earlier or subsequent period of time. Apart from the importance of a detailed analysis of the causation of movements in individual indices, it is necessary to study a considerable number of indices in conjunction. For example, the relative movements of the short loan rate and of the long period rate of interest; changes in stocks of commodities and raw materials; movements in bank loans, deposits, foreign borrowing; numbers of bankruptcies and bills protested; wage changes and employment figures. *Primo congresso nazionale di scienza delle assicurazioni.* F. INSOLERA.

AUGUST, 1928. *La riforma monetaria bolscevica.* J. GRIZIOTTI KRETSCHMANN. A survey of the steps by which the new chervonetz currency was substituted during 1923 and 1924 for the depreciated paper rouble currency previously in circulation in Russia. Considerable importance is attributed to the influence of the currency reform in hastening the depreciation of the "sovnaks" or Soviet paper roubles, which circulated chiefly in the country districts, and thus aggravating the intensity of the "scissors" crisis of 1923. *Media aritmetica e media geometrica nel calcolo dei numeri indici dei prezzi all' ingrosso.* R. BACHI.

SEPTEMBER, 1928. *Le riserve d'oro dell' America.* PROF. R. B. WESTERFIELD of Yale University holds that it is unlikely that the United States will lose any very considerable proportion of her existing gold holdings to the rest of the world. A future problem may even be to prevent a further influx of gold, which may lead to the cancellation of inter-allied debts, if the protectionist policy of the United States is maintained. The downward tendency of gold prices in the world as a whole is likely to continue and the rate of interest will go on falling, probably at a faster rate in Europe than in America. This will both check foreign borrowing in America and accelerate the coming of the time when the accumulated interest due to her in respect of such loans will exceed the annual amount of her exports of capital. *Alcune indagini statistiche sull' organizzazione bancaria italiana.* MARIO MAZZANTINI.

OCTOBER, 1928. *L'organizzazione delle vendite a rate.* GIOVANNI ANGRISANI. The system of payments by instalments differs from other types of credit transactions in that (*a*) the object of the contract is the purchase and sale of a commodity other than money; (*b*) the sums available for the extinction of the debt are not exclusively obtained from the employment of the article acquired, and the period of payment does not coincide with the period

of time during which the article is utilised. The benefits derived from the system are, firstly, and chiefly, the opportunity that it affords of increasing the total utility of the individual's income by increasing the scope of operation of the principle of substitution. Secondly, the encouragement of saving in the form of the investment of resources in relatively durable objects. Thirdly, types of expenditure are facilitated and made possible which increase the efficiency of the individual, *e.g.*, the acquisition of a house, or of a motor-car, which in America has enabled the workman to widen the market for his labour. The financial organisation behind the operation of the instalment system is still in its infancy, and dangers may arise through ignorance or neglect of sound principles, but with the improvement of statistical data and wider experience this new system should take its place as a valuable addition to commercial organisation. The writer disagrees with Prof. Seligman's criticism of the "actuarial method" of computing charges, and advocates the extension of the insurance principle based on accurate figures of the risk of bankruptcy and other causes of failure to complete the required number of instalments. The value of the article is enhanced by citations from, and references to, the already considerable literature on this subject. *Indagine sulla mortalità delle società italiane per azioni.* GIOVANNI LASORSA.

De Economist (Haarlem).

JULY–AUGUST, 1928. *De plaats der invoerrechten en accijnzen in het Nederlandsch belastingstelsel*, I. J. VAN DER POEL. A dissertation on the place of import taxes and excise duties in the Dutch system of taxation, but in fact a general discussion of taxation problems; in particular the article deals with the relations between customs and excise duties, and the question of equivalence between the two types of taxation; also with cases where the import duties are higher than the corresponding excise duty, and with the underlying reasons for this. On the general question of equity, the primary purpose of taxation is revenue, but the revenue is to be applied to the satisfaction of general needs. There can be no standard of equity; in different countries taxation may be imposed on different classes, and also the satisfaction of different needs may be aimed at. In a discussion of the incidence and the shifting of taxation it is argued that direct taxes also are subject to shifting; income tax may therefore be an element in the cost of production. Von Tyska is quoted with approval to the effect that whether taxes are shifted is a question of economic power, and in this respect there is little difference between direct and indirect taxes. *Sterftetafels, sterftecijfers en generatietafels.* IR. F. W. 'T HOOFT. A discussion of the various methods of constructing mortality tables with special reference to the work of van Pesch (died 1916).

SEPTEMBER, 1928. *De Gemiddeldenwet.* J. VAN DER WIJK. A discussion of the development and the interpretation of Pareto's Law. In amplification of the formulæ of Pareto and Gini, a third formula is suggested which, expressed in its simplest form, states that "the relation between the average income of those with an income of at least x and that marginal income x is constant" (in concrete terms, if the average income of those with an income of at least f. 1,000 is f. 3,000, the average income of those with at least

f. 10,000 will be f. 30,000). *De plaats der invoerrechten en accijnzen in het Nederlandsch belastingstelsel*, II. J. VAN DER POEL. This second instalment is, in the main, a defence of the place occupied by customs and excise duties in the Dutch system. In theory every citizen should contribute something to the general burdens; direct taxes are imposed on those who contribute out of their prosperity; excise duties come from needs beyond what is strictly necessary. The advantages and the merits of indirect taxes, psychological and otherwise, are enumerated and emphasised, and the defects of direct taxes pointed out.

Ekonomisk Tidskrift (Upsala).

1928, No. 1. *The Credit System and the Difference between the Rates of Interest.* E. HÄGERBLAD. *Some Figures Illustrating the Tax Burdens on Swedish Industrial Joint Stock Companies*, 1912 *and* 1924. E. LINDAHL. The double taxation on joint companies has during the period considerably increased. The additional tax burden amounts at present to about 13—14 per cent. of the profit. The total taxation on companies and stockholders absorbs consequently on an average one-third of the income.

1928, Nos. 2–3. *Present Problems.* D. DAVIDSON. At first the author discusses the possibilities of carrying out in practice the free trade scheme suggested by the Economic World Conference last year. In a second part of his essay Prof. Davidson criticises some projects for improving the Dawes plan, especially that one made by Prof. Ohlin in "Index" (edited by Svenska Handelsbanken, Stockholm). *Economic Aspects of the Co-operative Movement.* H. STOLPE. The article is a critical review of Th. Sinding: *Forbruksamvirket, forretnings- og organisasjonsprinsipper*, Oslo, 1927. In this number also are printed the following papers read to the Economic Society, Stockholm, followed by discussion. *The Right of Inheritance.* E. WIGFORSS. A Discussion on account of a new Bill. *The Danish Bank Laws and their Economic Consequences.* C. V. BRAMSNAES. *The Economy of the Swedish Air Traffic and Some Prospects of its Future.* F. EGNELL. *The Government and the Swedish Iron Industry.* O. EDISTRÖM.

1928, Nos. 4–5. *The World Food Production, immediately before, during and after the War.* E. HÖIJER. An account based on statistics published by the International Institute of Agriculture, Rome. *The Depression of Agriculture.* D. DAVIDSON. *The Money Policy of the Federal Reserve Banks.* J. ÅKERMAN. The author describes the money policy of the Federal Reserve Banks from 1914 and forward. He pays attention to the different considerations and economic interests which have been the determinative factors in this development. A criticism is delivered on the money policy during the last two years which, according to the author, has diverged from the practice of the preceding years and attached too much importance to the stabilisation of the price level. Finally, the international significance of this money policy is considered and some comments given on English monetary policy since the re-establishment of the gold standard. *The Unemployment Policy.* G. H. VON KOCH. A paper read to the Economic Society, Stockholm, presenting the Report delivered by the Swedish Unemployment Committee. Followed by discussion.

Revista Nacional de Economía (Madrid).

MAY–JUNE, 1928. *Dinamismo de los Precios y carestia de la vida* (conclusion). A. F. BAÑOS. The study of the primary causes of inflation is concluded by an analysis of the reactions of an unfavourable balance of trade and the effects upon the price level of changes in material output; movements in discount rates; tariff policies; market instability, etc. Among the secondary causes of the increase in cost of living given are speculation, cost of public services, agricultural depopulation and urban overcrowding, strikes and lock-outs, etc. Among the means suggested to prevent inflation are the avoidance of Government deficit, increase of production through development of scientific methods, reform of systems of taxation to make them more flexible, skilful use of discount rate and stabilisation of market conditions.

In dealing with the special conditions in Spain it is pointed out that the Treasury deficits were an important cause of the inflation 1913–20, and the author suggests, among other remedies, the reorganisation of taxation methods.

JULY–AUGUST, 1928. *El encabezamiento de Madrid por alcabalas de 1547 a 1556.* C. ESPEJO. An historical study of revenue raising in Madrid under the system by which each town made itself responsible for the collection and transference to the Crown of its stipulated quota of taxation. *La Distribucion de la Propiedad Territorial.* M. F. MARTIAÑEZ. A statistical study of the correlation between the sizes of estates in different parts of Spain and the movement of population and wealth per head. Between 1910 and 1920 population has tended to flow towards those areas in which the average estate is large. The connection between the value of yield per acre and the size of the estate is indeterminate. The author is surprised to find that the agricultural districts with the largest number of inhabitants per hectare are not also the districts where wealth per head is least. The movement of population appears to be away from areas where wealth per head is greatest.

Polish Business Conditions.

MAY, 1928. Poland has followed other countries in the creation of an *Institute for Economic Research*, which now publishes in English a quarterly review of its business conditions. This first issue deals with the period November 1927 to April 1928. In addition, a quarterly on *Business Conjuncture* is published in the Polish language (*Konjunktura Gospodarcza*), the first issue of which includes articles of a more general kind on fluctuations and their measurement. The Director of the Institute is Dr. E. LIPINSKI.

Economic Review (Kyoto).

JULY, 1928. *On the Taxpayer.* M. KAMBE. An interesting and original inquiry into the question of tax liability of governments (national or local) in respect of certain public enterprises; of the justification of separate corporation taxes; and of the family as the taxation unit. *Changes of Social Classes during the Tokugawa Period.* E. HONJO. *The Establishment and Maintenance of Peasant farms.* S. KAWADA. A study of the contribution of Japan to this problem, with some international comparisons. *Characteristics of Tariff Freight Rate in the Shipping Business.*

S. KOJIMA. An expansion of the author's previous expert studies of this question, dealing with shipping freights in respect of comprehensiveness, stability, openness, uniformity and amenability to immediate changes. *The State Disbursement of Compulsory Education Expenditure, and the Transfer of the Land Tax to the Local Treasuries.* S. SHIOMI. A full account of an important fiscal and political issue in Japan.

Indian Journal of Economics.

JULY, 1928. *The Progress of the Steel Industry.* H. L. DEY. *Village Debt Settlement.* H. G. FRANKS. *Reviews of the Royal Commission on Agriculture in India.*

International Labour Review.

JULY, 1928. *Co-operation and Monopolies in Sweden.* H. STOLPE. An account of the origin and aims of the Swedish Co-operative Union, and its policy of securing reductions in certain commodity prices, by the method of own-production, in the spirit of the co-operative idea. *Seasonal Unemployment in the Clothing industries.*

AUGUST, 1928. This number contains an account of the proceedings of the Eleventh Session of the International Labour Conference, which adopted a Convention and a Recommendation on Minimum Wage-fixing Machinery. It also includes official studies of the following subjects: *Seasonal Unemployment in the Clothing Industries; Shop-closing Legislation in European Countries; Regulation of Hours of Work in European Industry.*

SEPTEMBER, 1928. *Agricultural Workers and Agrarian Reform in Central Europe.* A. ROSE. *Recent International Developments of Social Work in Industry.* G. A. JOHNSTON. *The Financing of House Building in Countries with Rent Restriction Legislation.* K. PRIBRAM.

NEW BOOKS

British.

ABBATI (A. H.). The Final Buyer. P. S. King. 8½″. Pp. 194. 8*s*. 6*d*.

BELASCO (P. S.). Authority in Church and the State. Allen and Unwin. 8½″. Pp. 326. 12*s*. 6*d*.

BLEDISLOE (LORD). The Intensive Treatment of Grassland: a Revolution in British husbandry. Being an address delivered before the British Association at Glasgow on Sept. 7, 1928. P. S. King. 8½″. Pp. 32. 1*s*.

BRIDGES (A.) and LEE (J. R.). Sugar Beet Costs and Returns for the year 1926–27. Oxford: Agricultural Economics Research Inst. 9¾″. Pp. 27. 1*s*.

BRUNNER (C. T.). The Problem of Motor Transport: an economic analysis. Benn. 8½″. Pp. 187. 12*s*. 6*d*.

CANNAN (E.). Wealth: a brief explanation of the causes of economic welfare. Third edition. P. S. King. 7¼″. Pp. xxviii + 292. 5*s*.

COYAJEE (J. C.). India's Currency, Exchange, and Banking Problems, 1925-28. Calcutta: The Book Co. 8½″. Pp. 59.

DAVIES (J. L.). Grass Farming in the Welland Valley. A study made on behalf of the Agricultural Economics Research Institute, Oxford. Oxford: Clarendon Press. 8¾″. Pp. 66. 2*s*. 6*d*.

DEARLE (N. B.). Dictionary of Official War-time organisations. (Economic and Social History of the World War. British Series.) Milford. 9¾″. Pp. 322. 12*s*. 6*d*.

DE MONTGOMERY (B. G.). Pax Britannica. Methuen. 7½″. Pp. 249. 7*s*. 6*d*.

GREGORY (T. E.). An Introduction to Tooke and Newmarch's *A History of Prices and of the State of the Circulation from* 1792 *to* 1856. P. S. King. 8½″. Pp. 120. 2*s*. 6*d*.

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JOHNSTON (G. A.). Citizenship in the Industrial World. Longmans, Green & Co. 8¾″. Pp. 297. 12*s*. 6*d*.

KING (J. S.). Cost Accounting applied to Agriculture as an aid to more productive Farming. (Reading University Studies.) Oxford Univ. Press, 1927. 8¾″. Pp. 182. 7*s*. 6*d*.

LAMBERT (R. S.). Modern Imperialism. (W. E. A. Outlines.) Longmans. 6½″. Pp. 89. Cloth 2*s*., paper 1*s*.

MCKENNA (R.). Post-War Banking Policy. A series of addresses. Heinemann. 8½″. Pp. 149. 7*s*. 6*d*.

MEAKIN (W.). The New Industrial Revolution: a study, for the general reader, of rationalisation and post-War tendencies of capitalism and labour. Gollancz. 7½″. Pp. 284. 9*s*.

NOLAN (P.). A Monetary History of Ireland. Part II. From the Anglo-Norman Invasion to the death of Elizabeth. With an introductory essay on the Anglo-Saxon and Anglo-Norman money systems. P. S. King. 7″. Pp. xl + 213. 5*s*.

PREWETT (F. J.). A Survey of Milk Marketing, based on conditions in Wiltshire and Somerset and the City of Bristol, June 1927. Oxford: Clarendon Press. 9¾″. Pp. 74. 3*s*. 6*d*.

PRICE (M. P.). The Economic Problems of Europe, pre-War and after. Allen and Unwin. 8½″. Pp. 218. 8*s*. 6*d*.

RICHARDS (R. D.). Groundwork of Economics. University Tutorial Press, Ltd. 7½″. Pp. 294. 4*s*. 6*d*.

ROBERTSON (B.) and SAMUELS (H.). Pension and Superannuation Funds, their formation and administration explained. With a Foreword by Sir Joseph Burn. Pitman. 8½″. Pp. 134. 5*s*.

SAMUEL (A. M.). The Working of the Bill of Exchange: international trade and the way it is liquidated by bills of exchange; also an explanation of the overseas trade balance. Effingham Wilson. 8½″. Pp. 35. 1*s*. 6*d*.

SHERRINGTON (C. E. R.). The Economics of Rail Transport in Great Britain. Vol. I.—History and Development. Vol. 2.—Rates and Service. Arnold. 8¾″. 2 vols. 12*s*. 6*d*. each vol.

STEAD (F. R.). Title Deeds Old and New. Being the fourth edition of *Title Deeds and the Rudiments of Real Property Law*. Pitman. 9″. Pp. 184. 5*s*.

STREET (C. J. C.). Slovakia Past and Present. P. S. King. 8½″. Pp. 64. 1*s*. 6*d*.

TAO (L. K.). Livelihood in Peking: an analysis of the budgets of sixty families. Peking (London: P. S. King). 8¼″. Pp. 158 +xxii. 9*s*.

TOOKE and NEWMARCH. History of Prices and of the State of the Circulation from 1792 to 1856. Reproduced from the original. P. S. King. 8½″. 4 vols. £4 4*s*.

Viscount Haldane of Cloan, O.M.: the Man and his Work. By VISCOUNT GREY OF FALLODON, SIR CHARLES HARRIS, SIR H. FRANK HEATH, SIR CLAUD SCHUSTER. Milford. 9½″. Pp. 34. 1*s*.

WADE (A. S.). The Plain Man and his Money: a guide to Stock Exchange investment and speculation. Nisbet. 7¼″. Pp. 128. 2*s*. 6*d*.

WOO (T. C.). The Kuomintang and the Future of the Chinese Revolution. Allen and Unwin. 8½″. Pp. 278. 15*s*.

American.

ACHINSTEIN (A.). Buying Power of Labour and post-War Cycles. New York (London: P. S. King). 9″. Pp. 164. 12*s*.

Adam Smith, 1776–1926. Lectures to commemorate the sesquicentennial of the publication of *The Wealth of Nations*, by J. M. CLARK, P. H. DOUGLAS, J. H. HOLLANDER, G. R. MORROW, M. PALYI, J. VINER. Univ. of Chicago Press. 8¼″. Pp. 241. $3.

CLAPP (M. A.) and STRONG (M. A.). The School and the Working Child. Being a study of the administration of certain laws pertaining to children in industry by fifty school departments of Massachusetts. Mass. Child Labor Bureau. 7½″. Pp. 226.

COURNOT (A.). Researches into the Mathematical Principles of the Theory of Wealth, 1838. Translated by N. T. BACON, with an Essay on Cournot and mathematical economics, and a bibliography of mathematical economics, by IRVING FISHER. Macmillan. 7½″. Pp. xxiv + 213. 8*s*. 6*d*.

[A reprint of the edition of 1927, with the addition of *Notes on Cournot's Mathematics*, by Professor Fisher.]

CURTIS (R. E.). Economics. Principles and Interpretation. Chicago: A. W. Shaw Co. 9″. Pp. 879. $4.50.

DAUGHERTY (C. R.). The Development of Horse-power equipment in the United States. Philadelphia: Univ. of Pennsylvania, 1927. 9″. Pp. 112.

DORAU (H. B.) and HINMAN (A. G.). Urban Land Economics. Macmillan. 7¾″. Pp. 570. 17*s*.

ELLIOTT (W. Y.). The Pragmatic Revolt in Politics. Syndicalism, Fascism and the constitutional State. Macmillan. 8½″. Pp. 540. 16*s*.

FAIRCHILD (F. R.) and COMPTON (R. T.). Economic Problems: a book of selected readings. Macmillan. 1928. 8½″. Pp. 610. 12*s*.

Information Bureau on Women's Work. Wage rates, earnings, and fluctuation of employment: Ohio. 1914–26. Toledo, Ohio: The Bureau. 10″. Pp. 140. $1.

James (H. F.). The Agricultural Industry of South-eastern Pennsylvania. Philadelphia: Univ. of Pennsylvania. 9″. Pp. 168.

Kennedy (D. D.). Overhead Costs and the Shift to Machinery. Philadelphia: Univ. of Pennsylvania. 9″. Pp. 100.

Reinhold (P. P.). The Economic, Financial and Political State of Germany since the War. New Haven (London: Milford). 8″. Pp. 134. 8s. 6d.

Rodick (B. C.). The Doctrine of Necessity in International Law. New York (London: Milford). 8″. Pp. 195. 20s.

Rorem (C. R.). Accounting Method. Chicago (London: Cambridge Univ. Press). 9″. Pp. 596. 22s. 6d.

Secrist (H.). Banking Standards under the Federal Reserve System. A study of norms, trends and correlations of the assets, deposits, expenses and earnings of member banks. Chicago: A. W. Shaw Co. 9″. Pp. 420. $7.50.

Shepard (G. H.). The Elements of Industrial Engineering. Boston, etc.: Ginn & Co. 9″. Pp. 541.

Taylor (H.). Making Goods and making Money. New York and London: Macmillan. 7¾″. Pp. 296. 10s. 6d.

The Finances and Financial Administration of New York City. Recommendations and report of the Sub-Committee on Budget, Finance, and Revenue of the City Committee on Plan and Survey. New York (London: Milford). 9½″. Pp. lxxii + 361. 15s.

Wardwell (C. A. R.). An Investigation of Economic Data for Major Cycles. Philadelphia: Univ. of Pennsylvania. 1927. 9″. Pp. 147 + 92.

Warshow (H. T.). Representative Industries in the United States. London: Allen and Unwin. 8½″. Pp. 702. 18s.

Watkins (G. S.). Labor Management. Chicago: A. W. Shaw Co. 8½″. Pp. 726.

Williams (M. H.). Investment Trusts in America. Macmillan. 7½″. Pp. 152. 6s. 6d.

Woodward (W. H.). Profits in Insurance Stocks. New York and London: Macmillan. 7½″. Pp. 122. 6s. 6d.

Wright (P. G.). The Tariff on Animal and Vegetable Oils. (Institute of Economics Series). New York (London: Allen and Unwin). 7½″. Pp. 347. 10s.

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